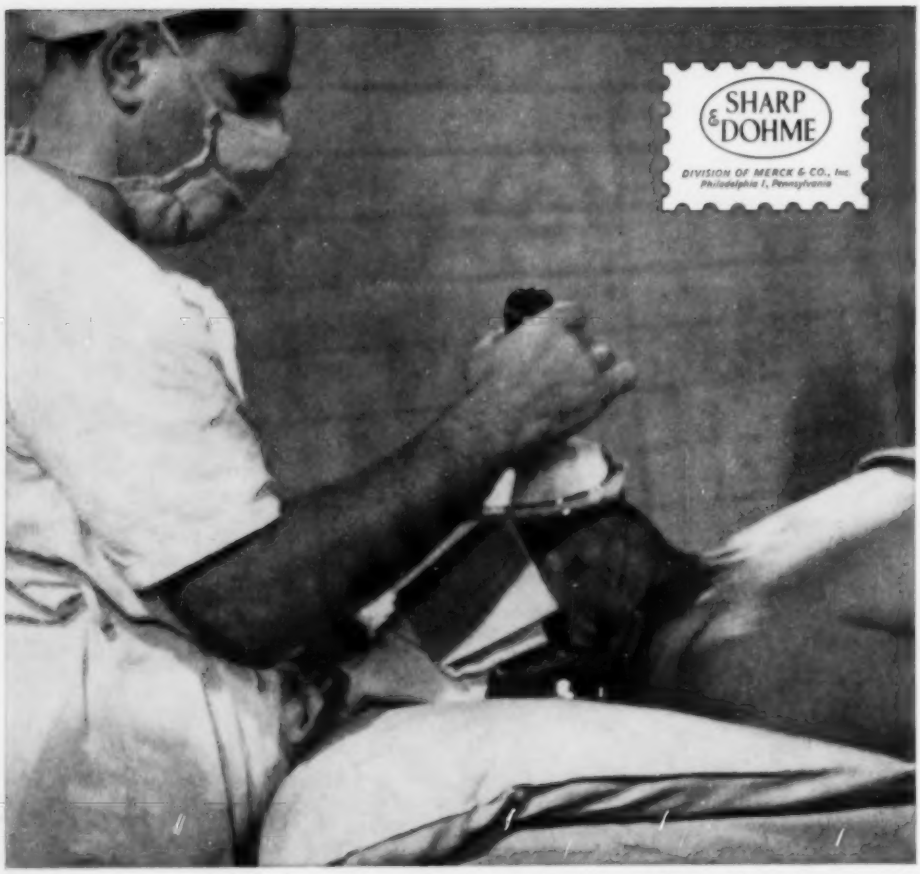
INDUSTRIAL MEDICINE AND SURGERY

Volume 23 APRIL 1954 Number 4



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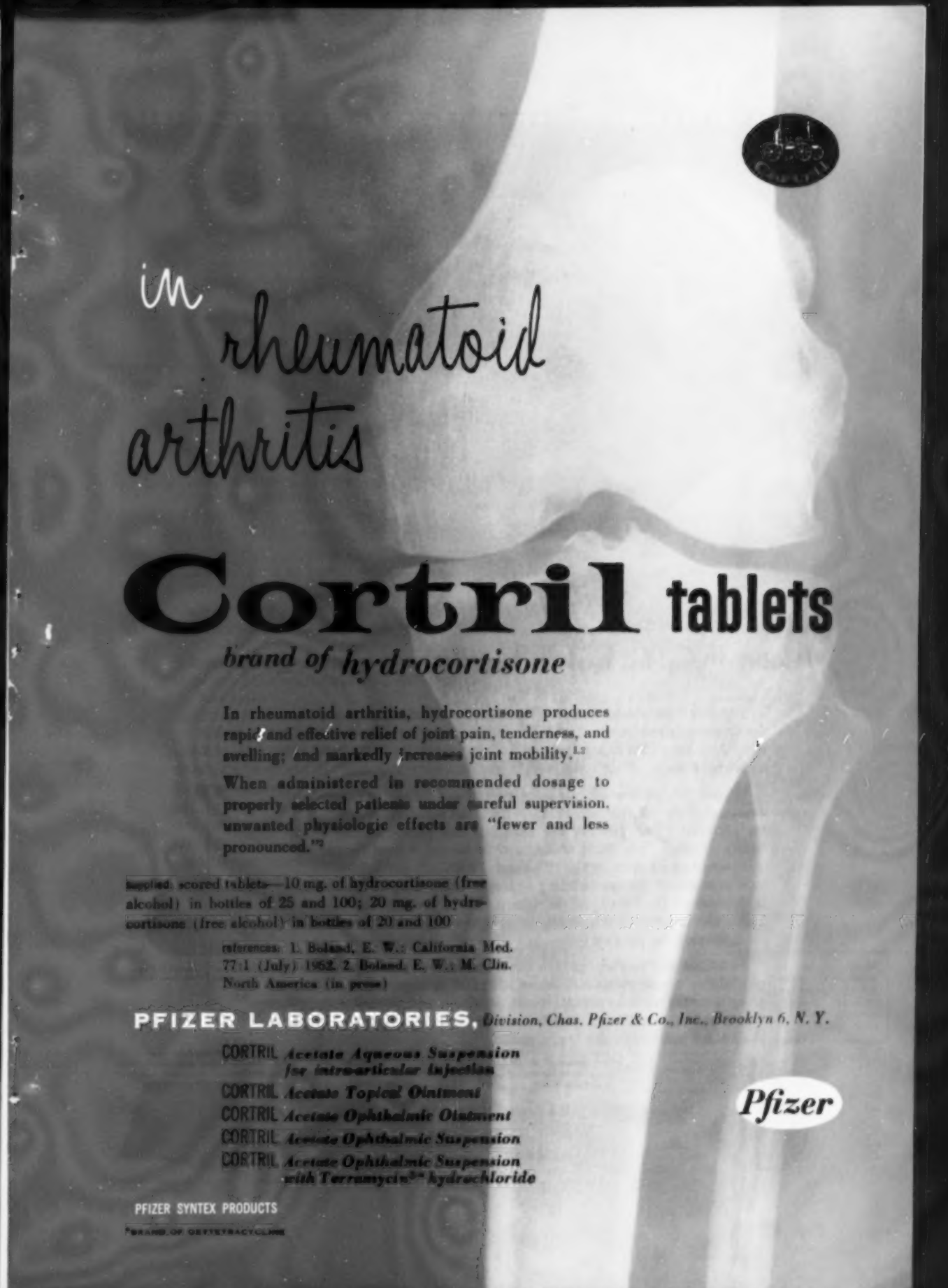

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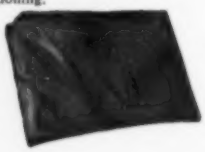

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This Journal is dedicated to the advancement of sound industrial medicine, including the surgery of industrial trauma. To that end its varying contents will embrace scientific papers, reports, digests, news items and official statements, together with editorial comment. The editorial policy is to avoid undue censorship. Some contributions ably prepared will be published although contravening the personal opinions of the editors. Care will be exercised in checking the accuracy of known facts, as printed, but in all other respects statements and opinions are those of the author and may not be shared by the editors. On any article, the editors reserve the right to comment favorably or otherwise, in the current or any subsequent issue. On this basis, contributions are invited. The opinions expressed in any contributions, including the editorials of this Journal, do not necessarily reflect the attitude or opinions of any associated organization.

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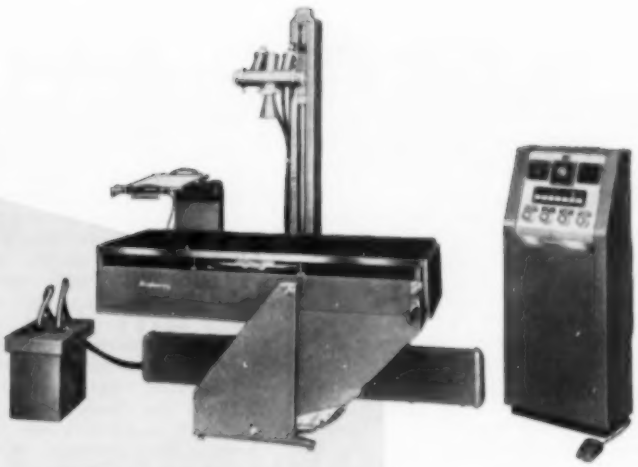

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SHELDON P. BLISS, M.D., formerly in Connecticut, and more recently with Chance Vought Aircraft in Dallas, Texas, has been appointed Medical Director of the M. W. Kellogg Company, Jersey City, New Jersey. DR. BLISS has been a member of the Industrial Medical Association since September 11, 1947.

AT THE Fourteenth Annual Congress on Industrial Health at Louisville, Kentucky, February 24-25, the Council on Industrial Health made it known that DR. WILLIAM P. SHEPARD, New York, Second Vice-President, Health and Welfare Division, Metropolitan Life Insurance Company, had been elected Chairman of the Council. DR. SHEPARD succeeds DR. ANTHONY J. LANZA, New York, Director of the Institute of Industrial Medicine, New York University-Bellevue Medical Center. Two new members of the council also were elected: DR. LEMUEL C. MCGEE, Wilmington, Delaware, Medical Director, Hercules Powder Company, and DR. CHARLES F. SHOOK, Toledo, Medical Director, Owens-Illinois Glass Company. They succeed DR. LANZA and DR. CLARENCE D. SELBY, Port Huron, Michigan, whose terms expired. DR. GEORGE F. LULL, Chicago, Secretary-General Manager of the *AMA*, announced that the Association had presented citations to DRS. LANZA and SELBY for their distinguished service in the field of industrial health. These were the first industrial health citations awarded by the *AMA*. Both physicians have been leaders in the movement for better health conditions among workers and were potent forces on the Council on Industrial Health over a long period of years.

—*AMA News Release*, March 19, 1954.

JOSEPH B. DAVIS, M.D., of Oceanside, California, has joined the staff of the Medical Department of Eaton Laboratories, Inc., professional subsidiary of Norwich Pharmacal Company, Norwich, New York. Educated at the University of Wisconsin and at Rush Medical College of the University of Chicago, DR. DAVIS saw service in World War II as an Army medical corps officer at Birmingham General Hospital, Van Nuys, California, and in 1946 was ship's surgeon with the Matson Naviga-

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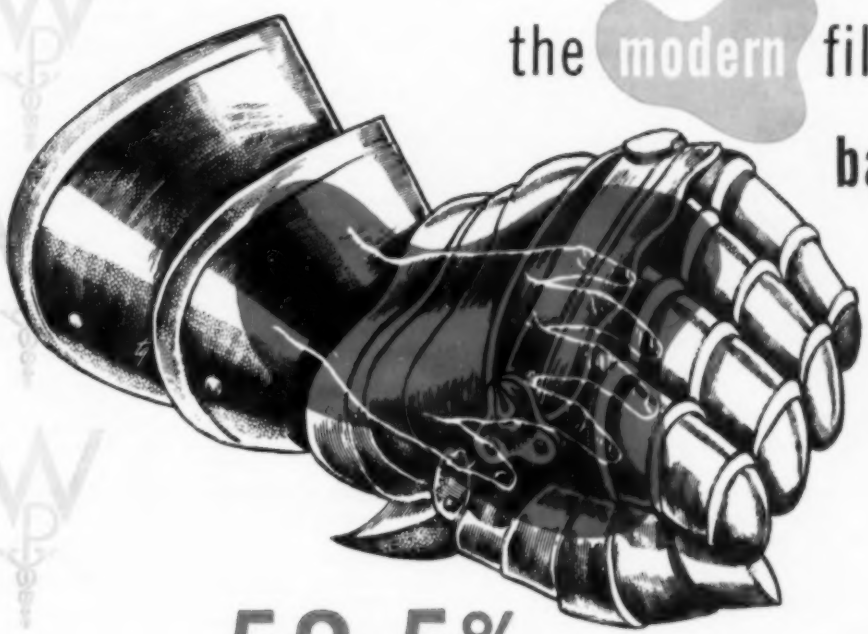

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tion Company. In private practice at Oceanside since 1946, DR. DAVIS served as school physician, surgeon for the Santa Fe railroad, and as director of Davis Clinical Laboratory and the Oceanside police department laboratory. Also a new member of the Medical Department staff of Eaton Laboratories, is MARINUS VAN WEELE, M.D. DR. VAN WEELE is a native of Holland; was educated on Long Island; received his doctorate in medicine at the Long Island College of Medicine, now the State University of New York College of Medicine; and, following graduate work at the Pasteur Institute, Paris, with DR. R. CHAUSSINAUD and at the Prince Leopold School of Tropical Medicine in Antwerp, spent three years in the Camerouns, West Africa, where he was a physician-surgeon at the Presbyterian Hospital at Ebolova. While there he directed the Ndjazeng Leprosarium which had more than 1,000 patients.

JOSEPH A. HUBATA, M.D., who has been Associate Medical Director of Armour Laboratories on special assignments, has been appointed Acting Medical Director, succeeding HERBERT H. HOLLAND, M.D., who resigned to become Medical Director of the Food, Drug and Cosmetics Administration of the Federal Security Agency. DR. HUBATA has been in industrial practice since 1936, his first industrial affiliation having been with International Harvester Company in that year. In 1946 he became Medical Director of Armour and Company, leaving that position to become identified with Armour Laboratories.

DR. ALICE HAMILTON, Honorary Member of the Industrial Medical Association, whose age is 85, fell on the lawn at her home at Hadlyme, Connecticut, on March 7 and is at the Lawrence and Memorial Associated Hospitals, 365 Montauk Avenue, New London, Connecticut, with an impacted fracture of the right hip. At this writing her condition is reported good.

CAPTAIN LAWRENCE T. SMYTH has won recognition as occupational health service chief at Kelly Air Field in Texas. Assigned to the air base 13 months ago, the Allentown-born doctor has "made tremendous improvements" in the industrial medical program, according to Army officials. CAPTAIN SMYTH, an alumnus

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of Holy Cross College, was graduated from the University of Pennsylvania Medical College, specializing in industrial medicine. He was associated with the industrial medical branch at Bethlehem Steel Company prior to entering the service. Kelly Air Force base in San Antonio is regarded as the world's largest air depot, and publishes a daily newspaper *The Flying Times*, which recently featured CAPTAIN SMYTH's record. "His first step in advancing the industrial medical program at Kelly was the procurement of the finest and most advanced clinical and laboratory equipment in order that industrial toxicological chemistry, bacteriological research, radar monitoring, and other laboratory analyses could be accomplished locally. Arranged in separate sections, this civilian dispensary is equipped to conduct special testing, x-rays, laboratory and bacteriological work, and render emergency treatment for injuries incurred on duty." Aside from describing thoroughly the many changes since his arrival at Kelly Air Field, the story reports the effectiveness of CAPTAIN SMYTH'S industrial medical program. In 1952, a total of 248 disabling injuries and illnesses occurred which kept civilian employees away from their jobs. Last year the disabling injury and lost-time figure was reduced to 35. The net cost reduction for these line-of-duty injuries amounted to $135,-893. The sick leave rate was also reduced from 3.06 to 1.91 over a nine-month period. CAPTAIN SMYTH has three civilian physicians and 17 civilian nurses.

—*Allentown, Pennsylvania, Call*, February 13, 1954.

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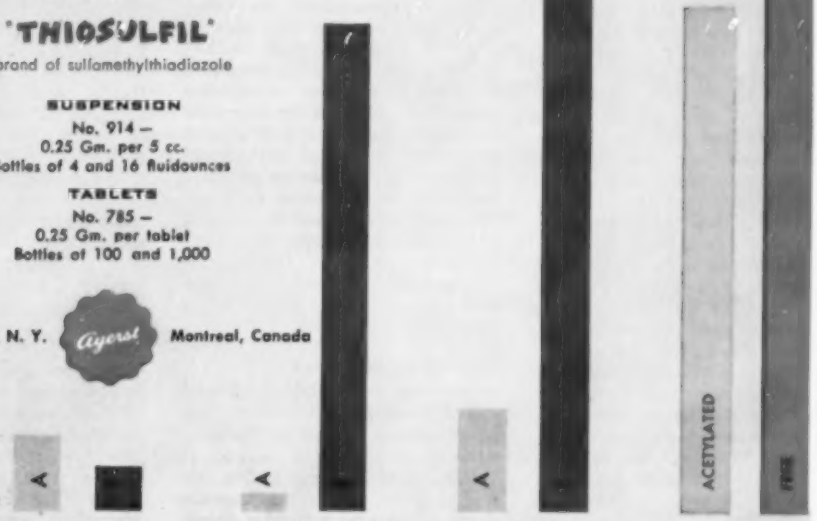

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WALTER T. HAUSHEER, M.D., of Staten Island, New York, has become identified with the Medical Department of Standard Oil Development Company. During World War II, DR. HAUSHEER served for more than four years with the Navy.

HARVEY B. SNYDER, M.D., has joined the Medical Division of Humble Oil & Refining Company in Houston, Texas, becoming associated with DR. VALLIANT C. BAIRD, who has been Humble's Medical Director since 1935. DR. SNYDER will serve as internist and diagnostician. He is a graduate of the University of Pennsylvania Medical School, and was formerly chief resident in Medicine at Jefferson Davis Hospital in Houston. He was also a consultant in electrocardiography at the Houston Veterans Administration Hospital, and has joined in publication of many medical articles, particularly dealing with research in diseases of the heart and blood vessels. Humble's Medical Division has created the new position of Medical Office Administrator, and MR. HOWARD J. STROUD has been named its first incumbent. MR. STROUD holds a master's degree in Public Health from the University of Michigan. He was previously Director of Public Health Education for the Atomic Energy Commission at Oak Ridge, Tennessee. More recently, he was Director of Health Education for the City of Houston. He has also had considerable academic experience as instructor and lecturer on public health education at the University of Michigan, at Baylor University College of Medicine, at several Houston hospitals, and to the U.S. Cadet Nurse Corps.

WESTERN Industrial Medical Association announces its 1954 Annual Meeting to be held Saturday, May 8, at the Biltmore Hotel, Los Angeles, California. Two panel discussions will feature the morning session, the first on the "Industrial Cardiac Problem," and the second on the "Industrial Back Problem." In the afternoon the third panel discussion of the day will have as its subject: "Medical Administrative Problems in Unemployment Disability Insurance."

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—*Supervisor's News Service* (Bureau of Business Practice, New London, Connecticut), in *Management Review*, March, 1954.

Foreign Assignment

THE U.S. PUBLIC HEALTH SERVICE has been requested to recruit personnel to staff the health missions of the Foreign Operations Administration in the various countries throughout the world in which they are operating. At the present time the Service has received a request for three Industrial Hygiene Engineers, and a fourth one is expected. These are for jobs in Venezuela, Brazil, Peru, and Mexico City. Candidates for these positions are either employed on a Civil Service basis or may be granted commissions in the Reserve Corps of the Public Health Service and called to active duty. In either case, salary is the same. The four positions have different classifications, but the base pay varies from $8,360 to $9,600 per annum. In addition to the base pay, there is a quarters allowance varying from $1,600 to $4,000 depending upon the money required to furnish adequate quarters. There is also approximately a $4,200 cost-of-living allowance in the Venezuela position since the cost of living is extremely high in that country. The USPHS is prepared to have interested candidates come to Washington for interview and conferences at government expense after receipt of their applications and a review of their qualifications. Detailed information may be obtained by writing to the Surgeon General, U.S. Public Health Service, Division of International Health, 4th and Independence Avenue, S.W., Washington 25, D.C.

Oklahoma Symposium

UNIVERSITY of Oklahoma School of Medicine will hold its first postgraduate Industrial Medicine Symposium on May 20 and 21 at the School of Medicine auditorium in Oklahoma City. This program is one of several activities spearheading the inclusion of industrial medicine in the curriculum of the school. The meeting represents an effort toward bringing together industry, medicine, law, safety engineering, and industrial relations for joint discussions of topics pertinent to these groups. Subjects to be covered include: "Recent Advances in Traumatic Surgery," "Industry's Challenge to the Medical Profession," "Aspects of Occupational Diseases of Interest to the General Practitioner," "Mental Health in Industry," "The Role of the Physician in Labor Relations," "Industrial Problems of the Painful Back," "Workmen's Compensation in Oklahoma," "Current Psychosomatic Understandings," "Rehabilitation of the Industrially Injured," "Injury Case Handling," "Current Industrial Hygiene Methods," "Industrial Safety," and "Disability Evaluation." Among the speakers are: EARL D. MCBRIDE, M.D., Oklahoma City; MR. W. H. SEYMOUR, Vice-President, Liberty Mutual Insurance Company, Boston; STEWART G. WOLF, JR., M.D., Oklahoma City; KIEFFER DAVIS, M.D., Bartlesville, Oklahoma; JEAN S. FELTON, M.D., Oklahoma City. The Symposium is sponsored jointly by the School of Medicine through its Office of Postgraduate Instruction, the Liberty Mutual Insurance Company, and the Oklahoma Academy of General Practice. Those interested should register in advance with the Office of Postgraduate Instruction, University of Oklahoma School of Medicine, 800 N.E. 13th Street, Oklahoma City.

North Carolina Institute

SCHOOL of Medicine of the University of North Carolina, in cooperation with the Occupational Health Committee of the North Carolina Medical Society, held an Institute on Industrial Health, at Chapel Hill, March 12. The morning program was as follows: "A Report on a Survey of Industrial Health Activities in North Carolina"—HARRY L. JOHNSON, M.D., Chairman, Occupational Health Committee, North Carolina Medical Society; "Industrial Health: An Interpretation"—WILLIAM P. RICHARDSON, M.D., Professor of Preventive Medicine, and Assistant Dean for Continuation Education, University of North Carolina School of Medicine; "Industry's Challenge to the Medical Profession"—W. H. SEYMOUR, Vice-President, Liberty Mutual Insurance Company; "Part-time Health Services in the Small Industrial Establishment"—PRESTON M. DUNNING, M.D., Medical Director Du Pont Plant, Kinston, North Carolina;

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and "Environmental Health Hazards in North Carolina Industries"—EMIL T. CHANLETT, M.S.S.E., Associate Professor of Sanitary Engineering, University of North Carolina School of Public Health. The afternoon had two panel discussions, one on "Some Factors in the Prevention of Accidents and Absenteeism," with DR. NATHAN A. WOMACK, Professor of Surgery and Head of the Department, University of North Carolina School of Medicine, as Moderator, and the other on "Problems in Industrial Health," with N. H. COLLISON, Vice-President for Operations, Olin Industries, Pisgah Forest, North Carolina, as Moderator. The panel members on prevention of accidents and absenteeism included W. GRANT DAHLSTROM, M.D., Associate Professor of Psychiatry, University of North Carolina School of Medicine, and Director of Psychological Services, North Carolina Memorial Hospital; WILLIAM L. FLEMING, M.D., Professor of Preventive Medicine and Chairman of the Department, University of North Carolina School of Medicine; GEORGE C. HAM, M.D., Professor of Psychiatry and Chairman of the Department, University of North Carolina School of Medicine; C. O. HUMPHRIES, M.D., Director, Employee Health Service, North Carolina Memorial Hospital; DEBORAH C. LEARY, M.D., Assistant Professor of Obstetrics and Gynecology, University of North Carolina School of Medicine; KERR WHITE, M.D., Assistant Professor of Medicine, University of North Carolina School of Medicine; and FRANK C. WINTER, M.D., Professor of Ophthalmology, University of North Carolina School of Medicine. The panel members on problems in industrial health included JOE M. BOSWORTH, M.D., Division Medical Director, Loss Prevention Department, Liberty Mutual Insurance Company; NORMAN BOYER, M.D., Medical Director, Ecusta Paper Company, Pisgah Forest, North Carolina; R. W. BUNN, M.D., Medical Director, R. J. Reynolds Tobacco Company, Winston-Salem, North Carolina; EMIL T. CHANLETT, M.S.S.E., PRESTON M. DUNNING, M.D., and W. H. SEYMOUR.

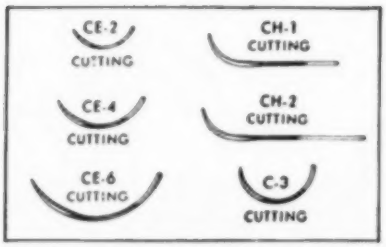
Recent Deaths

ROBERT P. KNAPP, M.D., Medical Director, Cheney Brothers, Manchester, Connecticut, Monday, March 15, at Manchester. DR. KNAPP was born in April, 1885; attended Syracuse University 1906-1907; received his M.D. at Columbia University College of Physicians and Surgeons in 1911. He was in general practice from 1914 to 1920, becoming identified with Cheney Brothers in the latter year. Active in the affairs of the American Association of Industrial Physicians and Surgeons during its early years, he was President of the Association in 1936-1937. He was the author of a number of articles on industrial medical subjects, among them one entitled "How Far Should Industry Go in Caring for Cases of Illnesses Not Due to Employment," in *J. Indust. Hyg.*, 1928.

HERBERT LESLIE MANTZ, M.D., at Kansas City, Missouri, December 14, 1953. DR. MANTZ was a Consultant in chest diseases for a number of industries. He was active in the Association of Railway and Industrial Physicians of Kansas City for many years, having held various offices in that component society. He had been a Fellow of the Industrial Medical Association since 1943.

This Month

THE series on "Lead and Lead Poisoning in Early America," by DR. CAREY P. MCCORD, concludes this month with "Shot Towers" (Page 169). This series started out with nine items; ended up with seven. The two not published are the Introduction and the Conclusion, the latter entitled "Transition to Modernity in Lead Poisoning." These, however, will appear in the reprint of the entire series, of which copies will shortly be available. . . . DR. CARL OLSON'S gentle admonitions ("Guide Us Aright," Page 59) seemed to him, before he had spoken them, as likely to be thought out of place. It was in his mind that "doctors don't talk that way any more." Nevertheless, he spoke them on several occasions, and was surprised and pleased at the number of his hearers who expressed appreciation, and asked for copies. While he may be right that doctors don't often *talk* that way nowadays, he has reason to believe that many of them *think* that way. The truth is that more of them than would care to admit it likewise *live* that way. That is the reason they are able to survive in the "light" under which they work. As DR. OTTO GEIER said (Page 182), "This light is like no other light in the world" . . . . IN *Industrial Medicine and Surgery* for October, 1953, regarding the Award for Health Achievement in Industry given by the Industrial Medical Association in recognition of the inauguration and improvement by the management of a company of a comprehensive Medical Service for its employees, it was said: "In the light of current developments, the Industrial Medical Association may have to consider the propriety of making more than one Award." That observation turned out to be prophetic; the IMA Committee charged with the selection for 1953 found it impossible to decide between the two medical services which were tied for first place in their canvass. And so, at the Annual Banquet at Hotel Sherman on Wednesday evening, April 28, *two* Awards for Health Achievement in Industry will be given. . . . FORTUNE for December, 1953, notes that there are 27 "billionnaire" companies in the United States which "employ some three million workers, pay them top wages, and turn out a flood of necessities and amenities at prices that workers can afford to pay" . . . . AMONG the plant tours scheduled for Friday, April 30, at the 1954 Industrial Health Conference, will be the following: (1) Inland Steel Company, Indiana Harbor Works, East Chicago, and (2) Veterans Administration Research Hospital, 333 East Huron Street, Chicago. . . . TO THE editorial, "The Metamorphosis of the Railroad Surgeon," in this Journal for March, a reader adds: "The present-day railroad surgeon has achieved a high place in the estimation of both the organization he serves and the profession he represents. He uses all the resources of medical science to produce a satisfactory result for the patient, the company, and the public; and the evidence of his success is reflected in the good opinion and esteem in which he is held." Reminds us of the Indian who paused in his smoke signaling to watch the huge smoke plume of an atom bomb test mushroom above the horizon. After some moments of thoughtful observation, he sighed: "I wish *I* had said that!"



Dermalon *monofilament nylon is available on* ATRAUMATIC *needles shown above. Pliability improved if nurse moistens* DERMALON *before passing to surgeon.*

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On the sixth *postoperative day, suture is withdrawn. Product 1682, of exceptionally smooth* DERMALON, *is very easy to remove.*

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The patient often judges the skill of the surgeon by the degree of scarring. There is minimal scarring with DERMALON monofilament nylon suture with ATRAUMATIC® needle attached—for example, D & G's CE-4 (⅜ circle cutting edge). This was developed by Davis & Geck at the request of plastic surgeons. It is now widely used for *many types of skin closures* in major and minor traumatic surgery.

30 days later—*hardly a trace of scar, because of surgeon's delicate handling of tissues and* minimal reaction *to* DERMALON *suture and* ATRAUMATIC *needle.*

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Brand of meclizine hydrochloride

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most prolonged action

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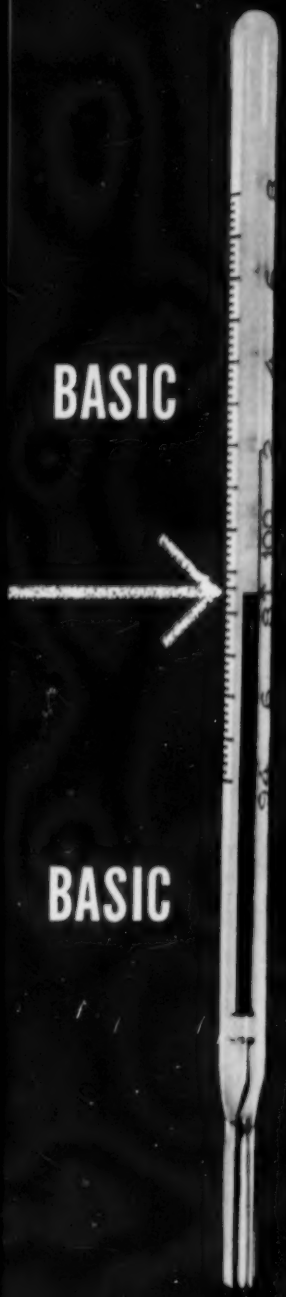

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*English, A. R., et al.:
Antibiotics Annual (1953-1954), New York, Medical Encyclopedia, Inc., 1953, p. 70.

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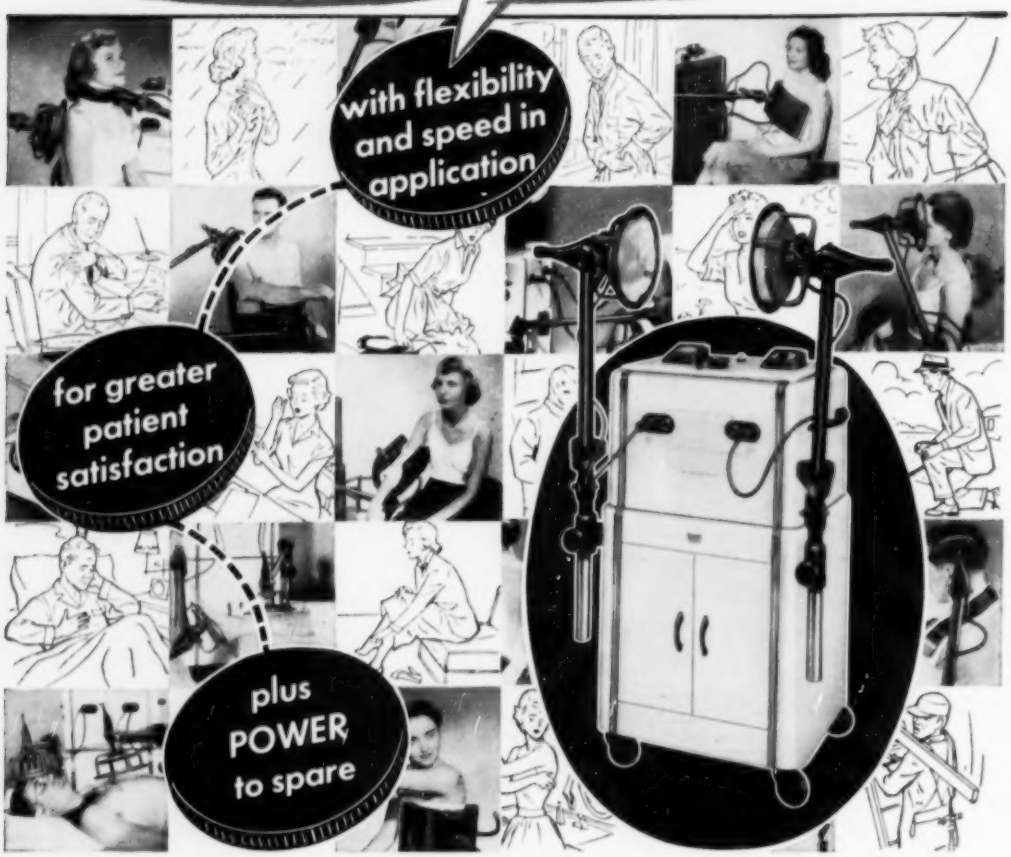

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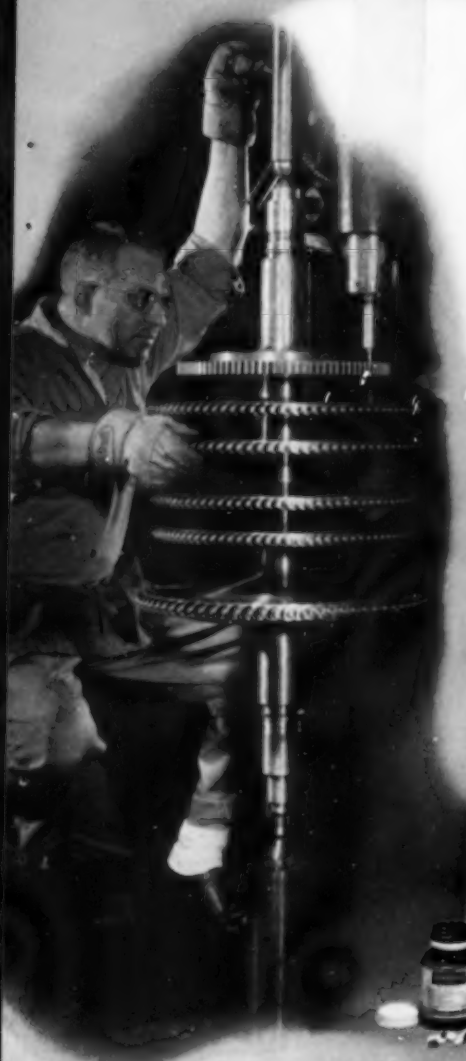
Critical evaluation shows efficacy of Donnatal® 'Robins' in*

GASTROINTESTINAL DISTURBANCES



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"More than 85% of patients with epigastric pain and discomfort were rapidly and completely relieved of symptoms."

"... many employees were able to resume work within an hour."

"... uniformity of composition ... convenience of dosage regulation, product stability, economy are factors of considerable importance."

*Barden, F. W., Hill, P. S., Mahaney, W. F., & Cuneo, K. J.: Journal Maine Med. Assn., Jan., 1954.

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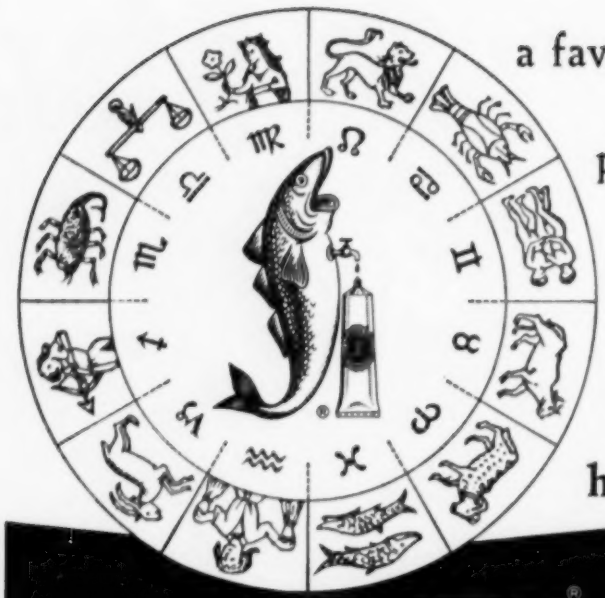
Elixir.....bottles of 1 pint and 1 gallon



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1. Grayzel, H. G., Heimer, C. B., and Grayzel, R. W.: New York St. J. M. 53:2233, 1953.
2. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives of Pediatrics 68:382, 1951.
3. Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Ind. Med. & Surgery 18:512, 1949.
4. Turell, R.: New York St. J. M. 50:2282, 1950.

at her first postpartum check up

Ortho

simple, effective conception control

when nausea and vomiting bring a plea for help . . .

suggest first aid with . . .

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a safe, pleasant-tasting, oral antiemetic . . .

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1. Bradley, J. E., et al.: J. Pediat. 38:41, 1951; Idem: Amer. Acad. Pediat., meeting Oct. 16, 1951.

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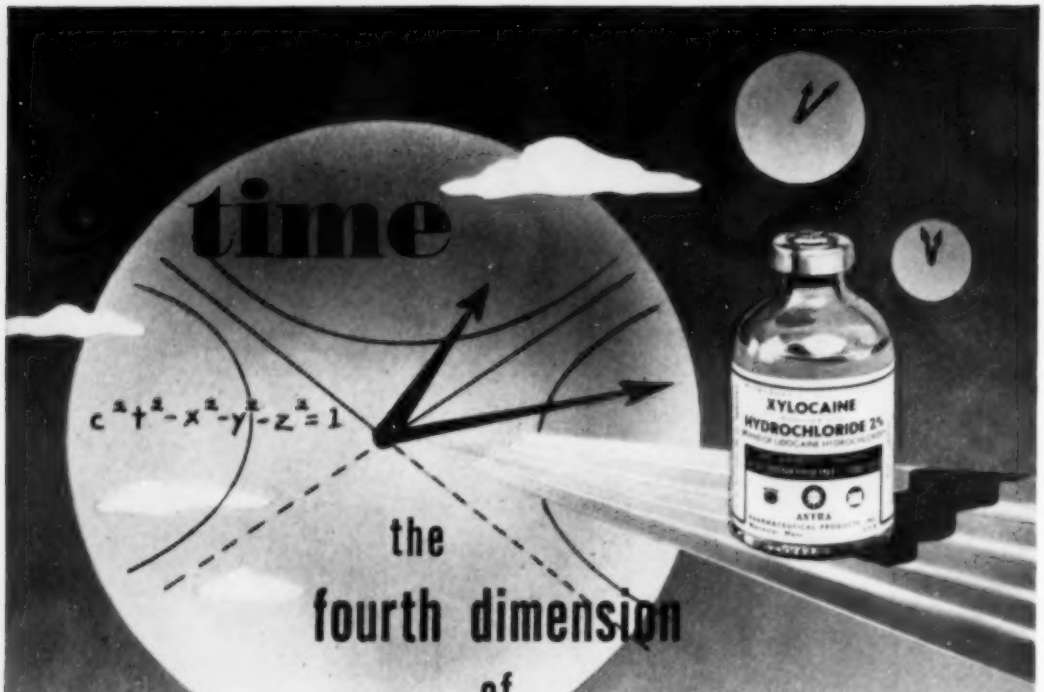

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1. Cowart, E. C., Jr.: Mississippi Doctor 29:278 (April) 1952.
2. Sayers, R. J., et al.: Am. J. M. Sc. 221:256 (March) 1951.
3. Knight, V.: New York State J. Med. 50:2173 (Sept. 15) 1950.
4. Trafton, H. W., and Lind, H. E.: J. Urol. 69:315 (Feb.) 1953.

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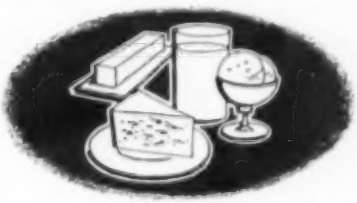

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Calcium	242 mg.
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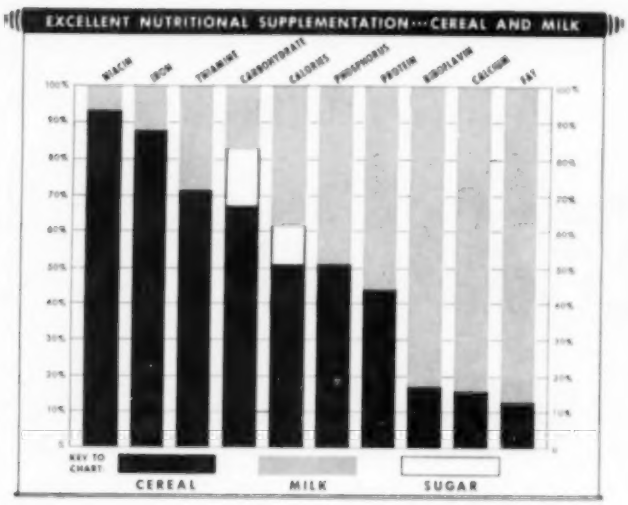
Cereal and Milk



In the above chart, 100 per cent equals the total amount of the nutrients common to both and calories supplied by the cereal serving. The black and gray bars represent the percentage contribution of nutrients and of calories made individually by the cereal and by the milk of the cereal serving. This shows that in five of the nine nutrients, as well as in calories, the breakfast cereal alone provides more than 50 per cent of the total amounts contributed by both cereal and milk, and almost 50 per cent of the protein. These figures demonstrate the excellent manner in which cereal and milk supplement each other.

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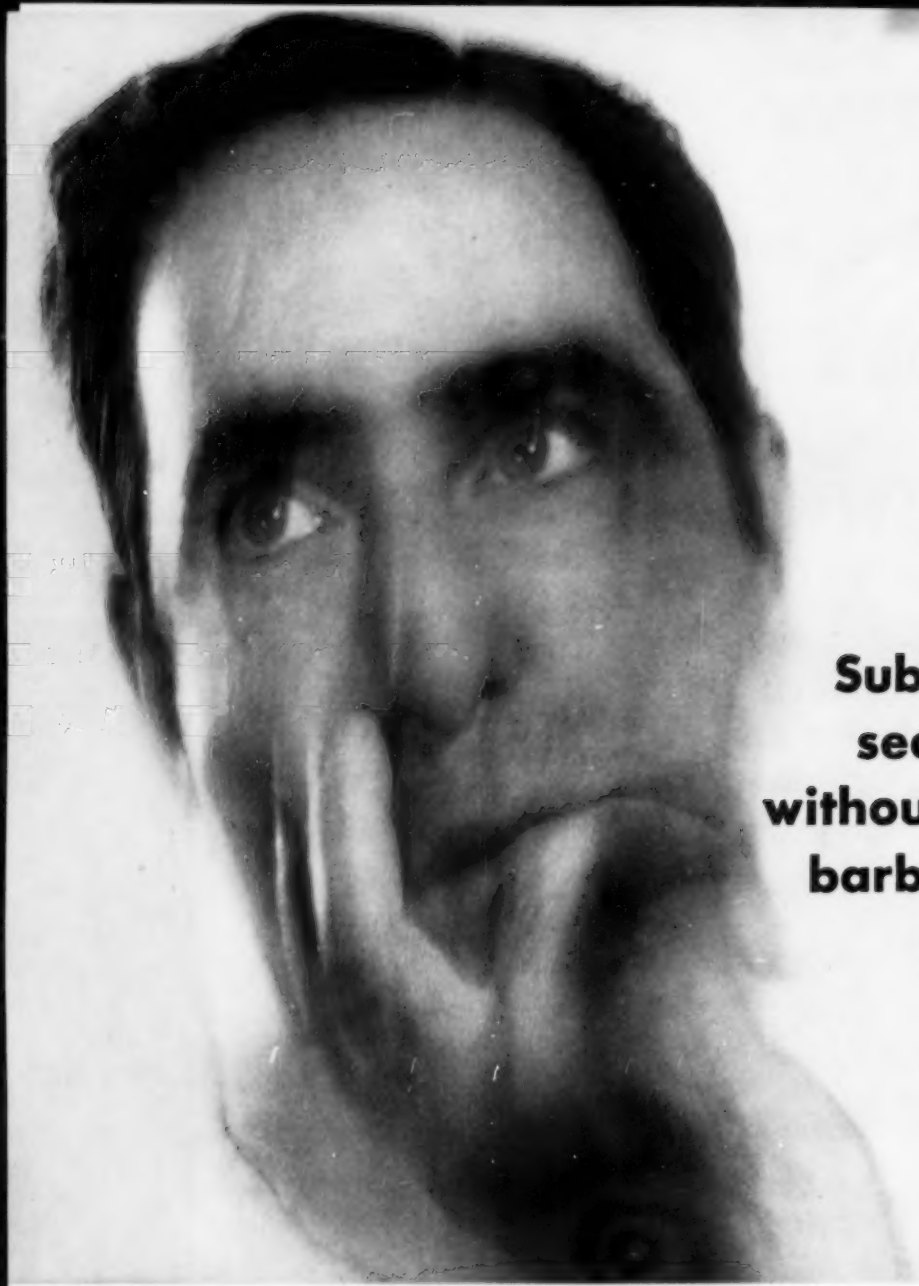

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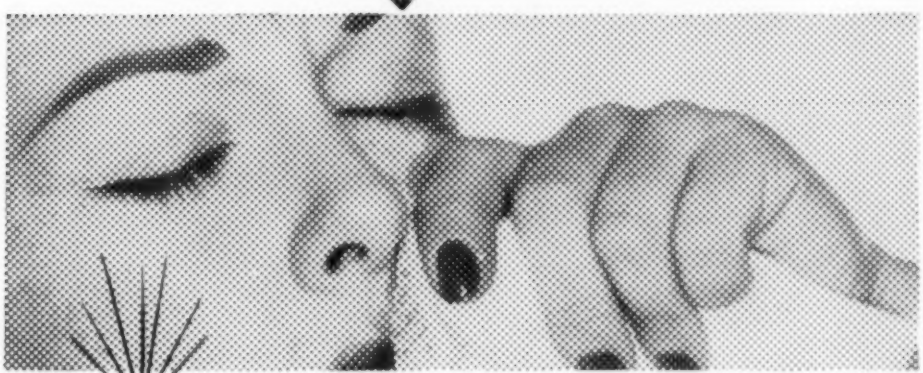

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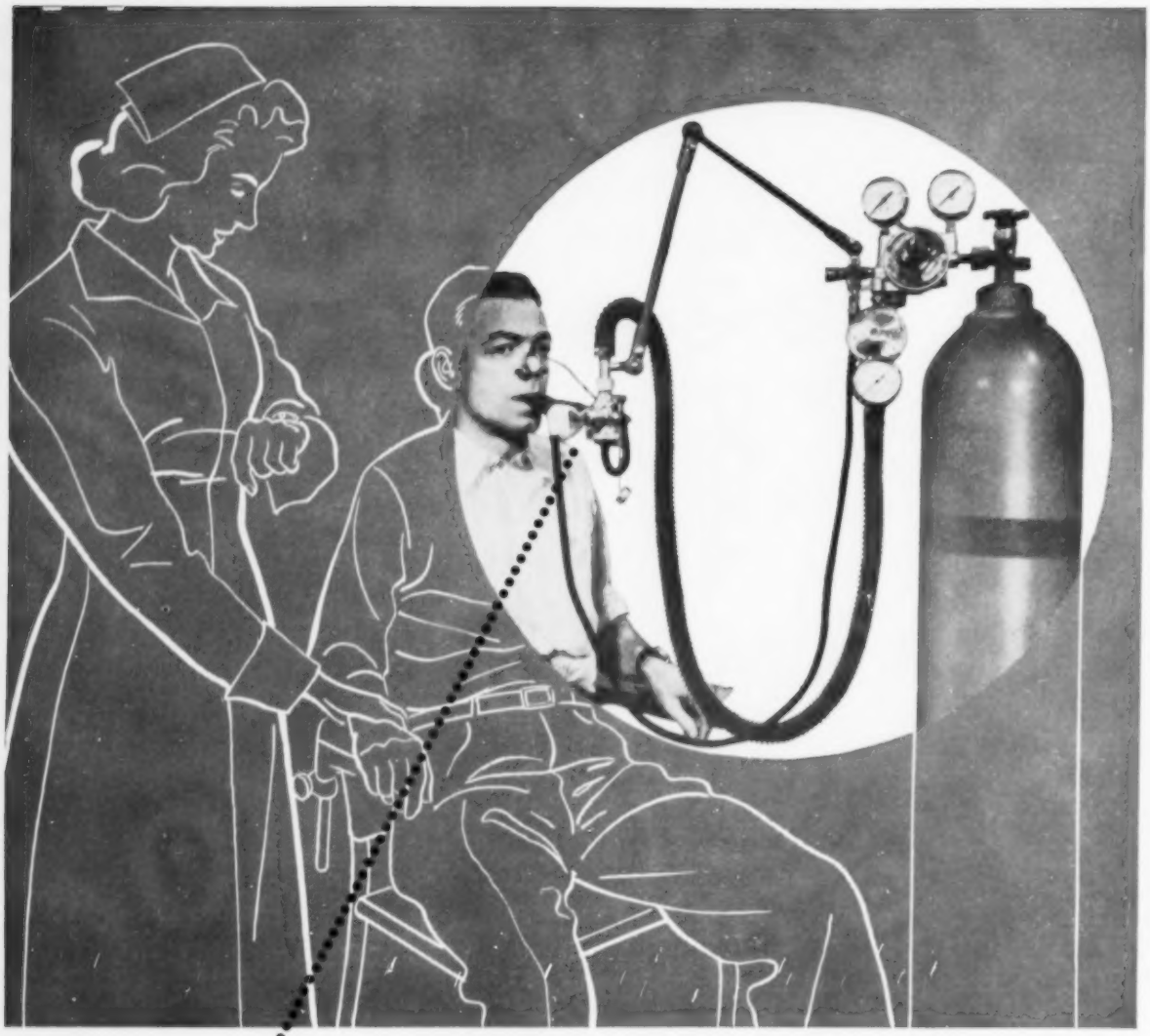

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INDUSTRIAL MEDICINE AND SURGERY
APRIL, 1954

Alcoholism and Industrial Health

ROBERT COLLIER PAGE, M.D.
Associate Clinical Professor of Industrial Medicine, New York University

THE PROBLEM drinker is a perennial subject for discussion and investigation at all levels of gainful occupation from gate-keeper to president. In general, "the peoples who have longest had alcohol—the Jews, Greeks, and Mediterranean peoples generally, the Hindus and Chinese—are not drunken; while others to whom drink is a relatively recent gift—the Slavs, Scandinavians, Germans, English, Irish, and their American progeny—are more prone to indulge to excess."[1]

This is probably somewhat like relative racial immunity to disease. Long use has weeded out the strains to which alcohol has been most poisonous. There is probably not a cellular or a serological immunity such as might be acquired to an infection, but rather a survival of such nervous systems as are less harmfully affected by drink.

Most authorities agree that no single factor is paramount in the etiology of the problem drinker.[2,3,4] This disturbing fellow has received attention from a variety of groups including doctors, psychologists, sociologists, the clergy, and legal and the various industrial groups.[5,6,7,8] Even a lay group has shown a marked interest in the problem.[9] There have been numerous and detailed studies into the personality structure, economic background, social state, and character of the problem drinker.[10,11,12,13,14,15]

In spite of the fact that these studies have revealed that alcoholism is a symptom of a disease, the exact nature of which has not as yet been determined, many continue to treat the subject as an entity.

Most of the counter measures have concerned themselves with an approach to counteracting the symptoms. This is apparent not only in management's disciplinary measures and in medicine's therapeutic approach but in attempts at legal correction as well.

In a previous evaluation of the problem drinker in industry, we pointed out two important facts:

1. The approach to problem drinking in industry, in the main, has been from the viewpoint of cost to management; and,

2. No basic attempt has been made to detect the problem drinker in his incipiency.[16]

It is apparent from these facts that industry must approach the problem from a personal point of view. Industry must evaluate the problem drinker in terms of the individual's welfare. The total personality of each afflicted person must be evaluated, with intensive study given to detection in the earliest possible stages when something positive and constructive can be done before the late effects make his problem apparent to everyone. At the present time, the average cost of rehabilitation, when possible, rarely produces a final entry on the credit side of the ledger.

In medicine in general, little effective preventive medicine has been possible in any disease or symptom complex until methods of instituting early detection were devised. Adequate therapeutic means then followed in close sequence. Effective control of tuberculosis and syphilis would not have been possible if all efforts had been directed primarily to the physiology of hemoptysis or to the neurological significance of a positive Romberg. It is likely that a parallel exists today in medicine's and industry's approach to the problem drinker. My associates and I have this point of view.

A critical review of the histories of random cases of alcoholism has alerted us to the fact that the very persons most acutely concerned—the wife, the employer, the fellow worker, and the family physician—through a misguided sense of "helping" are, in fact, hiding the problem drinker in his earliest stages. By so doing, these very people are paving the rocky road that ultimately leads to the potential candidate's downfall with its far-reaching undesirable effects.[17,18]

At the corresponding meeting of this group last year, we were presented with the "half-man" concept; this was a graphic picture of the problem drinker in his earliest stages[19]; the man (or woman) who overindulges in alcohol, yet is able to report to work the next day and seemingly

In collaboration with DR. JOHN M. DALEY and DR. E. R. HAWKINS, Clinical Division, Medical Department, Standard Oil Company (New Jersey); presented at a Conference on "Problem Drinking and Industry," Hotel Biltmore, New York, March 3, 1954.

function in his (or her) usual manner. However, this "half-man," in spite of his presence and appearance, was not able to perform in his customary manner; his output was low, his efficiency reduced, his margin of error greater. Among this group are the potential problem drinkers of tomorrow. No one knows how many of these "half-men" there are or how many will proceed to become obvious problem drinkers. Certainly after a variable period of time, they become known or suspected among a number of their associates.

THE medical approach to prevention has classically followed isolation of the etiologic agent and description of pathologic anatomy. Out of the mass of data concerning the problem drinker, no clear etiology has appeared. Many characteristics and factors have been determined, and it is apparent that a combination of factors involving personality background, situational state, and possibly allergic reaction are important interacting relationships to produce the problem drinker. In spite of extensive chemical and physiologic studies, no determination of pathologic anatomy is available. It is thus apparent that we do not have the classical background that will provide us with a clue to the prevention of alcoholism. Lacking this classical background, what means do we have available for early detection?

As previously pointed out, no serious study of this approach has been made. In this post-war period considerable work is being done in approaching the problem drinker in industry with a view to providing a solution.[20,21,22,23,24,25] While some of these efforts have shown considerable promise, they are, for the most part, "after the fact." The ill effects have become manifest, with all their manifold woes. During this same period, a broader, more effective therapeutic approach has also developed, involving psychiatric, chemotherapeutic, and group therapy.[26,27,28,29,30,31]

To this must now be added another phase in the approach to the problem drinker. It is a role that can be played by all those who are interested in any way in constructive health maintenance.

Certain basic considerations must be understood by all concerned. Overindulgence in the use of alcohol is not a distinct and separate medical problem in industry. It is a part of the general problem of constructive health maintenance, involving preventive techniques of the most searching type. We belive that the techniques developed in the concept of constructive medicine[32] are likewise applicable to the problem drinker. Constructive medicine, by thorough periodic inventories, seeks to determine the situational state prior to the onset of psychosomatic disorders. These same principles of action can well be applied to finding the problem drinker. The great difference is that the problem drinker, unlike the health-conscious employee or the man with a pain or a cough, does not seek medical aid. All rational people seek early aid when disease strikes or potential illness threatens. The problem drinker, on the other hand, because he uses alcohol as an escape mechanism, invariably does everything possible to avoid detection by those who might threaten his means of escape. Because of the stigma and penalties, those close to the alcoholic are prone to aid him in avoiding this detection.

The actual role of the doctor in industry in this phase of the life of the potential problem drinker is necessarily confined to its educational aspects. The physician, trained in human relations and understanding of adult behavior as manifested by the many bizarre actions and complaints of the apparently normal individual, is perhaps the best equipped person in industry to do this job. He alone can assemble, in profile fashion, the many physical, emotional, social, and possibly allergic factors involved. All scientific knowledge available must be translated for lay consumption. From now on the job is for an educator of the highest order. In an industrial organization, this educative program must first be directed to Personnel Departments and supervisory personnel who are in daily contact with potential candidates. The Medical Department must be alerted by these individuals whenever there is a question of doubt. Since the earliest effects of problem drinking may be observed by those who are closest to the person involved, the general educational program must be directed to this level—to the wife who reports her husband "sick" when he has a hangover; the supervisor or fellow-worker who covers up for the absence or lack of efficiency of the "half-man"; the family physician who hides the true problem under the diagnosis of gastritis or some other medical terminology. Not until these groups are made aware of the importance of early detection and the potentialities of early treatment can the problem drinker have the advantage of the positive, preventive, and constructive methods of cure now developed.

When these cases are brought to its attention, the Medical Department's role then becomes clear. It must provide a total environmental evaluation of the case. The physician in industry must consider the alcoholism not as an entity separate from general medical problems but as part of a personality profile which covers the individual not only in regard to his physical findings but from his occupational, social, and family evaluations as well. In this manner a picture of the total personality can be assembled.

At this stage, the significance of the important factors of stress in relationship to the various facets of his maladjustment may be determined, thereby allowing solution before marked dependence upon alcohol has developed.

In many cases it will be necessary to call upon paramedical services in the evaluation of the given case. The doctor may refer the case for special psychologic, psychiatric, or clinic study.

IN ALL constructive, industrial health maintenance departments, it is actually possible at this time to have knowledge of all problem drinkers within the organization. I firmly believe that if managements were acutely aware of the possibilities of early detection, they would pave the way for Medical Department evaluation of every

known case "from the top down." When this does come about, the problem drinker will cease to be a topic of major concern.

Such a program implies, of course, that top management will insist that every department head and supervisor join in the effort, with possible disciplinary action if they do not. This would mean the evaluation of the man who reports with a hangover more than once a week—the man who reports sick for obscure causes—the man who habitually drinks to excess at social gatherings —or the man who gets into legal difficulties because of alcohol.

Medical evaluation would be followed by appropriate therapy; those uncooperative or not suitable for therapy would then be referred for administrative action. The big problem is to sell such a program to management and labor. Furnished with all our present knowledge, both management and labor would be more likely to embark upon such a program. Teamwork among all who have to do with people, in contradistinction to those who deal with finance and machines, is requisite.

This approach would expose the early case and lead to its full evaluation and appropriate therapy. As a result there would be a reduction in the number of cases of problem drinkers, with an associated maximum return for therapeutic efforts expended.

Concentration on the part of all concerned upon this area of early detection is positive and constructive and should do much to prevent human misery and economic loss to the potential problem drinker and his immediate associates.

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The Medicine of the Future

THERE is a difference between prophylaxis and prevention. The physicians generally mix these words. Prophylaxis is the defense against the biological agents—microbes and physical agents, climate, traumatic factors, etc. Prophylaxis is the defense against those biophysical factors. On the other hand, prevention is the defense against social factors, but there still is another more advanced and recent medicine which would constitute a fourth concentric circle and which is related to pedagogy and includes an infinite number of aspects. This is Formative Medicine (synonymous with Constructive) towards which we are now on the way and of which we will be speaking further. It will be enough now if we say that the Formative or Constructive Medicine is the fourth dimension of the medical estate; the object of which is to 'perfect the health'; which is active, dynamic; that looks for the man through his different ages; that tries to improve and perfect him through a rational sanitary education and the following rationalization of his activities. I wish to mention that this is the medicine of the future since it includes the most deep and complete humane sense and because it leaves it to the will of the individual and the knowledge of himself, so that man can improve his own life for himself, for his family, and for his community."

—From "Summary of a Presentation Made at the Second Argentine Congress of Labor Medicine, April, 1953," by Prof. Dr. Mario Pablo Francone, in *The Medical Bulletin*, October, 1953.

Phalangeal Fractures

TREATED BY OPEN REDUCTION AND KIRSCHNER-WIRE FIXATION

CARL E. NEMETHI, M.D., Los Angeles

SKELETAL malalignment should be recognized and corrected early, avoiding the necessity of correction by osteotomy later."[1] Immediate pinning stabilizes the fractured fragments in anatomical position and, by eliminating pain and deformity, maintains muscle balance and function of the hand. Motion in the joints can be started at once, thus avoiding the usual post-fracture syndrome of edema, pain, and irreversible tendon and joint changes which result in permanent disability. Bunnell writes, "Finger fractures are so frequent and result in so much disability that they cause about as much compensation expense as do fractures of the long bones. . . . Joint stiffening in fingers is a necessary evil, especially if the fracture is in or near the joint, greatest in the joint involved, but also involving the others. This tendency to stiffen, and the frequency of the flexor and extensor tendons to be bound fast in the callus of the proximal or middle phalanx, accounts for the great disability from finger fractures. . . . If there is rotary displacement the finger flexes in the wrong plane."[2]

An unofficial estimation of all informal hearings on permanent disability in Southern California for the first three months of 1953 indicates approximately 70% of all permanent disability to be due to hand and finger injuries. Of this 70%, 35% were due to limited motion in the fingers and the other 35% to amputations.

Early motion in the hand and fingers is a cardinal "must" in the prevention of disability. Lengthy immobilization spells disaster. Only by internal fixation of the fragments can this early motion be achieved. Vom Saal states that severely comminuted fractures should not be pinned and that some oblique fractures defy the use of this method.[3] However, we have found that all types of phalangeal fractures can be successfully treated by open reduction and pinning, and that any digit demonstrating a reasonable chance for survival, regardless of the type of fracture, is best treated by this method.

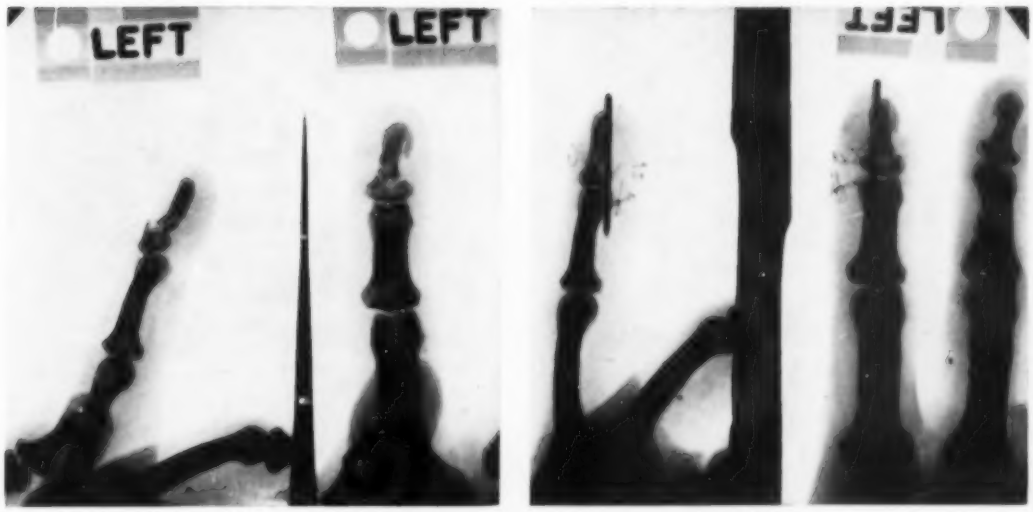
Severely crushed and contaminated wounds involving compound, comminuted fractures should be treated within an hour of injury. Meticulous debridement and irrigation are mandatory, converting such wounds into a lesion which is surgically clean. Operative exposure is best obtained through a dorsolateral skin incision and the length of incision must be adequate to permit retraction of the extensor-tendon mechanism and afford full vision of the fracture site. Occasionally it is necessary to split the extensor tendon longitudinally to effect adequate exposure. Direct visualization eliminates the possibility of bone rotation, displacement, angulation, and the incorporation of soft tissues in the fracture site. The actual reduction is not difficult. The distal bone spicules should be matched to the corresponding proximal fragments and then wedged together. Such impaction ensures union and encourages healing. Once impacted, the fracture can be held by a converted hemorrhoid clamp, ready for drilling the Kirschner wire. The actual pinning can start from either end and x-ray examination will aid in determining the best approach. Enough bone must be transfixed to establish solid support. The wire is carried from the lateral aspect of the bone just proximal to the joint, through the cancellous bone and at right angles to the fracture site, and anchored in the proximal fragment. Solid anchorage must be obtained. If necessary, the pin can be carried into the proximal phalanx or even to the metacarpal. Transfixing joints or passing the pin through other structures should be avoided if at all possible. Ideally, the pin should incorporate only the bone fragments of the fractured phalanx.

Following the reduction and pinning, all moving and gliding parts should be inspected to be sure they are not included in the pinned fracture. The protruding end of wire should be cut off so that it will be covered with skin, leaving only a small papule of identification for its later removal. The skin incision and lacerations are closed with No. 38 stainless steel wire sutures, a dressing applied, and the finger placed on a volar plaster splint in a position of function. Adequate antitetanic and antibiotic therapy is instituted.

Bony union takes place in four to six weeks. X-ray evidence of union is sufficient to warrant removal of the pin. This procedure is almost painless, since the pin is now loose in the bone. Patients can return to work immediately after pinning. Those engaged in office work need not be splinted, those in heavy industry should wear a splint while at work as a precautionary measure, but should remove it after work so that active motion can be begun at once.

Open reduction and pinning are especially indicated in certain complicated types of fractures:

Fig. A. Compound, comminuted fractures of the distal phalanges are difficult to reduce and obtain sufficient impaction for good healing. Open reduction and intramedullary pinning permits the fragments to be aligned, impacted, and held in position by Kirschner wire. Where it is impossible to transfix the bone, the wire may be



— 1 — Fig. A. — 2 —

1. Compound, comminuted fracture of the distal phalanx. 2. Postoperative film shows the transfixion pin. Where it is not possible to transfix bone, the Kirschner wire may be passed through the soft tissues along the volar surface of the bone.

drilled into the dense soft tissue adjoining the periosteum on the volar surface, the tip of the wire being anchored into the insertion of the flexor profundus tendon and the fragments threaded along the wire and impacted.

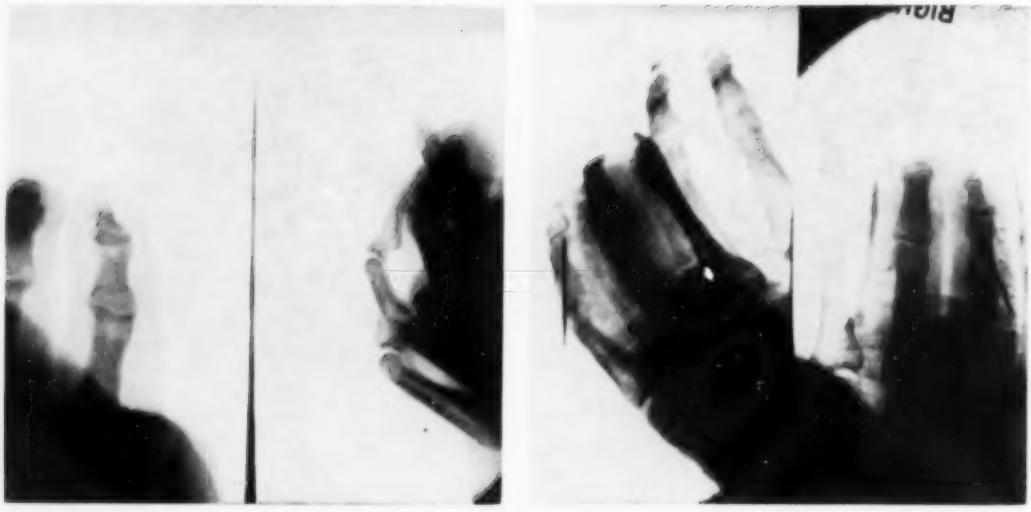
Fig. B. Comminuted fractures in the proximal phalanges present the problem of buckling forward at the site of the break. The dorsal aponeurosis is held taut by the action of the intrinsic muscles and long extensor tendon. The pull of the long flexors on the middle and distal phalanges increases the buckling force. These forces are so powerful that they defy closed reduction and immobilization in casts, splints or traction.

Fig. C. Fractures just proximal to the insertion of the sublimis tendon present the same problem. The long extensor tendon pulls the proximal fragment dorsally, while the sublimis jams the distal fragment into the proximal, increasing the angulation and displacement.

Fractures of the last two types present strong resistance to closed reduction and result in marked permanent disability. Pinning stabilizes the bone anatomically and thus, by removing these adverse factors, restores the normal muscle balance of the hand.

— 1 — Fig. B. — 2 —

1. Roentgenogram shows fracture of the proximal phalanx with typical buckling-forward deformity. 2. After reduction and impaction the bone fragments were stabilized by Kirschner wire drilled obliquely through the phalanx and at right angles to the fracture. Due to the short and comminuted proximal fragment, it was necessary to carry the wire into the metacarpal to obtain adequate fixation. Good motion was obtained in the middle and distal joints during healing.



—1— Fig. C. —2—

1. The middle phalanx fractured proximal to the sublimis tendon insertion shows typical deformity: the proximal fragment is displaced dorsally and the distal fragment is jammed into it. 2. Fragments are aligned and pinned approximately at right angles to the fracture. The pin avoids joints, permitting movement of all the joints while healing.

Comment

DISABILITY in the hand is caused primarily by loss of nerve supply (or other irritation resulting in causalgia), vascular interference, and decreased nutrition. Edema follows, and disposition of serofibrinous exudate in the joints and soft tissues results in shortened collateral ligaments, adhesions, thickened capsules, bone decalcification, and muscle atrophy. Once established, these reactions are irreversible. They can be avoided by immediate definitive care. Anatomical alignment and internal fixation stop pain and permit active motion of the hand and fingers, thus fulfilling the cardinal requirements for good hand therapy. Motion of the hand and fingers and the pumping action of the muscles increase circulation and discourage edema and its disastrous aftermath. Closed reduction generally fails to dislodge soft tissues which may be caught in the fracture site; anatomical alignment is difficult and, if accomplished, is not adequately held by external fixation. Early motion, of course, is precluded. The inaccuracies of closed reduction contribute to non-union or massive callus formation incorporating tendons, collateral ligaments or joint capsules, and result in marked permanent disability.

Conclusion

1. ALL TYPES of phalangeal fractures can be successfully treated by open reduction and pinning.

2. The technique is not difficult if the simple principles of hand surgery are followed.

3. Patients can return to work at an early date with security against displacement of the fragments.

4. This method of treatment reduces permanent disability, especially in certain types of fractures where disability is apt to be severe.

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Catastrophe Plans

LED BY General Electric more than 150 companies have installed "major medical" or "catastrophe" plans to cover such diseases as cancer, TB and other long illnesses. These plans are usually integrated with regular group medical insurance, which pays the first part of the bill. The employee pays the next $100 to $600, in somewhat the same way as he would pay for minor auto damage under a deductible policy. Anything over that (up to as much as $10,000) is paid by the insurance company. Premiums need not be prohibitive under such deductible schemes. At Sears Roebuck, dependents are excluded from the major medical plan to keep costs down, and the premium runs to only 40 cents a month.

—From "Rx for Industry," in *Time*, March 29, 1954.

Accident Proneness

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THE finding that a small percentage of the population is involved in most of the accidents has been variously interpreted and has led to a considerable amount of misdirected effort. It is being taught in the schools and preached over the air and in the press that 15% of the population is responsible for 85% of all accidents, and that all we need to do to solve the accident problem is to detect and cure this small group of people. The question arises whether this "15% of the population that suffers 85% of all the accidents" is a fixed group of accident-prone individuals or whether it is merely a statistical concept of an ever changing population.

The British Medical Research Council[1] writes that there is a tendency for those who have an undue number of accidents in one period to have an undue number of accidents in all subsequent periods "each hour of the day, each day of the week, each month of the year, and each subsequent year." Again, from the Transactions of the 35th National Safety Congress:[2] "A relatively small number of employees account for the great majority of industrial injuries. These employees are so highly susceptible to accidents that they cannot avoid having them regardless of how anxious they may be to do so. . . . They are the persons who are affecting the accident rate to the greatest degree. In fact, the elimination of the accident proneness of these . . . . employees (8%) would result in a 45% decrease in total minor injuries."

Such is the prevailing view in the literature, and the generally accepted working basis in the field of safety and accident prevention.

Thirty-Five Thousand Accident Cases

THE writer's clinical experience and studies do not support this view. In 1947-'48, and subsequently, he analyzed a consecutive series of 35,000 accident cases, studied in private practice over a period of 20 years under his personal care and supervision. These consisted of 27,000 industrial accidents and 8,000 non-industrial accidents.

The industrial accidents included patients from an unusually large number and variety of small and medium-sized commercial and industrial establishments. The non-industrial accidents included many family groups and patients from all social and economic levels, and from all sections of greater Cincinnati.

Both sexes and all age groups were adequately represented, and the series included all types and manner of accidents and both major and minor injuries.

These studies indicated that:[3]

1. The tendency to have accidents is, in the main, a phenomenon that passes with age, decreasing steadily after reaching a peak at the age of 21. The accident rate at the age of 20-24, in both our industrial and non-industrial series, is two and a half times higher than at the age of 40-44, four times higher than at the age of 50-54, and nine times higher than at the age of 60-64.

2. Most accidents are due to the increased liability to accidents of youth. Seventy percent of the non-industrial accidents occurred before the age of 35, and nearly 50% before the age of 25.

3. Men are significantly more liable to accidents than women, the ratio of male to female accidents being 2:1 in the non-industrial series and apparently even higher in the industrial series.

4. Most accidents (74%) are due to relatively infrequent solitary experiences of large numbers of individuals (86%). These figures were identical for the industrial as well as for the non-industrial series, and remained constant for nearly every year of a 20-year period.

5. Those who suffer injuries year after year, over a period of three years (3-5%), account for a relatively small percentage of all the accidents (0.5%).

6. Irresponsible and maladjusted individuals are significantly more liable to have accidents than responsible and normally adjusted individuals.

A Shifting Group

FROM the foregoing it can be computed that, on the basis of age and sex distribution alone, a small percentage of a given population could account for most of the accidents. Simple chance is, of course, also a factor in the unequal distribution of accidents. The presence in any population of an undue number of highly "accident-prone" individuals would naturally accentuate the unequal distribution due to the factors of age, sex, and chance. Our studies indicate that, when the period of observation is sufficiently long, most accidents occur in individuals with a low degree of proneness, and that the relatively small percentage of the population that contributes a disproportionate number of accidents is essentially a shifting group, with new persons constantly falling in and out of the group. The excessive liability to accidents in youth seems to disappear with age and, in most of the highly "accident-prone" individuals, with learning, with physiological and psychological adaptation,

or with the development of more adequate psychological defenses.

Clinical experience suggests that in the course of a life span almost any normal individual under emotional strain or conflict may become temporarily "accident-prone" and suffer a series of accidents in fairly rapid succession. Most persons, however, find solutions to their problems, develop defenses against their emotional conflicts, and drop out of the highly accident-prone group after a few hours, days, weeks, or months. Some persons remain highly "accident-prone" throughout life, with or without lapses of years of freedom from the accident habit. The latter are the truly "accident-prone" individuals. They contribute, however, only a relatively small percentage of all the accidents.

This point of view is not without support in the literature. Vernon[4] states that accident frequency usually decreases with age; also, ". . . . the accident proneness of various individuals is not a fixed quality, but is liable to be affected by any and every change in their bodily condition. This condition is influenced by external changes of environment as well as by internal changes of physical and mental health." Johnson,[5] in an intensive study conducted for the U.S. Government, concluded that there exist two groups of accident-prone individuals, those who are now young and those who have had an unusually high rate of accidents in the past. Horn,[6] in a study of 10,000 aircraft pilots who have had two or more accidents in the air, shows that a pilot is much more likely to have another accident within 30 days of his first one—but the probability that he will have another accident decreases markedly as time passes. Dunbar[7] concluded that the accident habit is not necessarily a fixed quality. Cobb[8] found that vehicle operators . . . . "who are accident-repeaters in one period tend to regress toward the average of the group in another period."

Brown and Ghiselli,[9] in a study of the accident experience of 93 trolley car and motor coach operators, found that the coefficient of correlation of the number of accidents sustained in odd and even months over an 18-month period, showed a wide range of variation, from 1.9 to 0.80 with an average 0.40. From this, the authors conclude that "accident proneness as a general trait of the individual has not been substantiated."

In 1929, in an analysis of half a million accidents, Heinrich[10] demonstrated a fixed relationship between accidents with injury and accidents without injury, as well as between major (lost-time) and minor injuries. Similar accidents, Heinrich states, may produce minor or major injuries, or no injury at all. In a unit group of 330 similar accidents, 300 result in no injury, 29 in minor injuries, and one in a major injury. On the basis of these studies and an estimated annual toll of 10 million lost-time injuries, there are, roughly, three billion accidents and 300 million minor injuries annually in the U.S.A.

Such an over-abundance of mishaps suggests that accidents are a common human characteristic. In our own experience there have been few individuals past the age of early childhood who have not had at least several minor injuries. Memory alone is a poor guide to the incidence of injury; patients will often deny previous injury when numerous scars on exposed areas obviously tell a different story. We therefore agree with Vernon[4] that it is more nearly correct to speak of relative degrees of "accident proneness," rather than of the presence or absence of proneness. The evidence presented is in sharp conflict with the prevailing theory that most accidents are sustained by a relatively small and fixed group of individuals.

Summary

THE currently accepted theory that most accidents are sustained by a small fixed group of "accident-prone" individuals is open to question. On the basis of clinical experience and studies, the writer suggests that most accidents are due to relatively infrequent solitary experiences of large numbers of individuals. The total number of accidents suffered by those who injure themselves year after year, over a period of three or more years, is relatively small. The frequently observed unequal distribution of accidents appears, among other things, to be due to the unequal liability to accidents on the basis of age and sex, to transient or prolonged states of physical, physiological or psychological stress, to chronic "accident-proneness," and to chance. The evidence indicates that if the period of observation is sufficiently long, the "small group of persons who are responsible for most of the accidents" is essentially a shifting group of individuals with new persons constantly falling in and out of the group. It seems to be more nearly correct to speak of varying degrees of "accident-proneness" rather than of the presence or absence of proneness.

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Auditory Fatigue in Industrial Hearing Testing

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IN ORDER to prevent hearing loss among employees and to obviate medicolegal entanglements many noisy industries are establishing conservation-of-hearing programs. One of the essential aspects of these programs is testing the hearing acuity of each employee with an audiometer. Reliable and valid testing is of utmost importance in order that the resulting audiogram be acceptable for medicolegal purposes. Standard methods for audiometry are well established, but there are many pitfalls, particularly in routine industrial testing, which may result in inaccurate hearing thresholds and negate the test or confuse its interpretation for both legal and research use. Most of these potential errors have been previously described.[1,2] One of the common pitfalls concerns itself with the phenomenon of auditory fatigue or the temporary hearing loss caused by exposure to noise.

While it is generally agreed that the hearing of new employees should be tested when there is no auditory fatigue present, i.e., prior to their exposure to industrial noise, the most advantageous time to do succeeding tests is not so readily apparent. Should subsequent audiograms on newly engaged personnel and on others who have already been exposed to intense noise be done after a week-end of rest, such as on a Monday morning? Or should they be done immediately after exposure or at a specified later time? It is the purpose of this report to describe and discuss an experiment which may help in part to answer this problem for some industrial situations.

A large industrial plant, concerned with testing jet engines, employs about 145 persons who are daily exposed to continuous jet engine noise in what are known as "test cell areas." Routine audiograms, performed in a standard manner, have been taken on all these employees semi-annually over a period of five years, in most instances. These tests were all done at times when the employees presumably showed no significant evidence of auditory fatigue. From among these employees, 32 subjects (64 ears) were selected for this experiment at random by the job foreman. Included in the group were some men having maximum daily exposure and also some who were newly employed.

The apparatus used to test the hearing throughout the study was a Western Electric 6 BP Audiometer the calibration of which was checked prior to daily experimental use. The sound level readings were made with a calibrated Scott Sound Level Meter, using the "C" scale giving a flat frequency response. The spectral analysis was obtained from a Scott Sound Level Meter coupled to a Scott Half Octave Band Sound Analyzer.

A brief job analysis revealed that all the employees are confined to an area in which noise levels remain comparatively steady and do not fluctuate widely. On the days this experiment was conducted the greatest noise exposure was 110 decibels except for fleeting moments of 114 decibels. Fig. 1 shows the minimum noise exposure of the subjects on the days their hearing was tested. Fig. 2 shows the octave band analysis of the average noise.

4 HOURS	DAILY	104 TO 110 db
1 HOUR	DAILY	100 db
½ HOUR	DAILY	96 db

Fig. 1.

OCTAVE BAND CYCLES/SEC.	INTENSITY
37 – 75	90 db
75 – 150	92 db
150 – 300	97 db
300 – 600	98 db
600 – 1200	96 db
1200 – 2400	94 db
2400 – 4800	87 db
4800 – 9600	64 db
OVERALL LEVEL	ABOUT 106 TO 108 db

Fig. 2.

All the audiograms were done by the author in the same room with a steady ambient noise level between 50 and 55 db. A previous study established that this specific ambient noise did not significantly affect the hearing threshold values in the octave frequencies between 2,000 and 8,000 cps, inclusive.

On each of several days prior to the men's reporting for work at 8:00 A.M. and after approximately a 16-hour respite from any intense noise, at least two separate hearing thresholds were obtained on each of the 32 subjects. In all cases these proved consistent with each other and with previous thresholds obtained in the semi-annual routine testing. Otological examinations were

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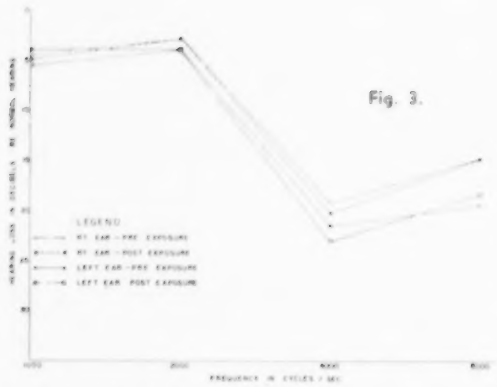

Fig. 3.

done to exclude middle ear pathology. Of the 64 ears tested only 16 showed normal hearing acuity, on the basis that less than 15 db loss in any frequency is considered normal. Practically all the significant hearing losses were at 4,000 and 8,000 cycles (Fig. 3). None of the men in the entire group used ear protectors in his routine work.

The age distribution of the subjects was from 25 to 57. None of them showed evidence of any conductive hearing loss, either otologically or audiometrically.

Following about three hours' exposure to continuous jet engine noise described in Figs. 1 and 2, audiograms were repeated on each subject. The time schedule was so arranged that all post-exposure audiometry was done about 10 and no later than 15 minutes after the subjects left the noisy areas. After an hour for lunch and about three more hours of exposure in the afternoon, the tests were repeated on most of the subjects at the morning time interval whenever possible.

Comment

FIG. 3 compares the average hearing loss of the 64 ears in each frequency before and after the exposure. It is apparent that no significant difference in auditory acuity resulted in the average loss as a result of a day's exposure to this specific noise. An individual analysis revealed that, on the basis that a persistent 15 db loss in any frequency is significant, none of the subjects demonstrated any significant auditory fatigue in any frequency by 15 minutes after exposure. Two of the subjects retained as much as a 25-db loss at 8000 cps 10 minutes after exposure, but the hearing acuity returned to its pre-exposure levels within five more minutes. It seems safe to say that for this specific industrial situation the factor of temporary hearing loss may be discounted if audiograms are done 15 minutes after routine daily exposure. This makes it possible to obtain stabilized hearing thresholds on these personnel at almost any time of the day.

One of the prime purposes of most industrial conservation of hearing programs is to compare an employee's hearing threshold before he starts work with his stabilized hearing threshold after he has worked in the noisy environment for a given time, such as, several weeks or months.

This comparison is done primarily to detect, as early as possible, any ears which are unusually sensitive to the specific noise and which may develop permanent deafness. If such ears are detected, the obvious solution is to change the employee's job, make him wear hearing protectors, or use noise abatement measures. However, it is hardly justified to compare an initial auditory threshold, which is free of auditory fatigue, with a subsequent one which may demonstrate a considerable degree of only temporary loss, and thereby to draw any valid conclusions as to an employee's susceptibility to permanent deafness.

There is, as yet, no convincing evidence that ears which sustain either prolonged or exaggerated auditory fatigue, as now measured, are more susceptible to permanent deafness. Experiments[3,4] have shown that many ears may sustain marked degrees of auditory fatigue daily even for years without suffering permanent hearing loss. It may even be possible that some of these ears are more resistant to permanent hearing loss than those that show less fatigue. The relationship between temporary and permanent hearing loss is still not clearly understood.

Sometimes it is difficult to be certain that no significant degree of temporary loss exists. In other situations the loss may persist for so long that protracted periods of rest are required for it to disappear. This is probably the case with the chippers described by McCoy[5] and demonstrated in Fig. 4. Curve A, shows the hearing acuity of a new group of men prior to exposure to the noise produced by chipping. After several hours of chipping in an over-all noise level measured at 120 to 135 db, the hearing acuity is shown in curve B. The hearing for high tones has dropped from an average of 10 to an average of 60 db. This is a severe loss. Some authors have suggested that auditory fatigue may exist for many weeks or even months after exposure to noise, but this has not as yet been experimentally validated. If it should be, it will undoubtedly complicate decisions in some conservation of hearing programs, but at present a long delay before determining permanent hearing loss is more applicable to the final determination of compensation than to routine testing.

It is recognized by the author that it is not

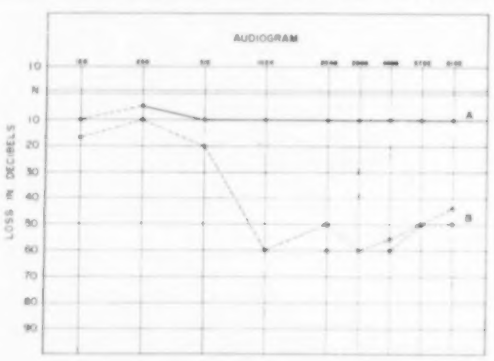

Fig. 4.

practical in a large industry to delay hearing tests until an employee has been free of industrial noise for several hours, and the testing of large numbers of employees can certainly not be done on a Monday morning. But by conducting pilot experiments, such as herein described, it may be possible for each industry concerned with the problems of noise to determine if auditory fatigue is a factor in routine testing and also to plan the audiometry so that the resulting threshold will have more medicolegal and research significance. Care, of course, must be exercised in selecting a representative number of subjects for such a pilot experiment.

The author should like to emphasize that the findings herein described apply for the stated specific industrial situation. Furthermore, the present study should not be misconstrued to indicate that no auditory fatigue is produced by this specific jet engine noise. The study indicates only that for the purpose of this particular conservation of hearing program temporary deafness is not significant 15 minutes after exposure under the conditions described.

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Fourteenth Annual Congress on Industrial Health

—AMA Council on Industrial Health—

This Congress assembled at the Brown Hotel in Louisville, Kentucky, February 23-24, 1954. The audience was not a gathering solely of industrial physicians but embraced among the 300 participants a large representation from county and state medical associations. In a just sense it may be stated that the Council on Industrial Health accepts as one of its major enterprises the education of the general medical profession in the significance of occupational health in the increasingly obvious industrial culture of the United States and Canada. This effort is well reflected in the first day's sessions which were devoted to conferences between the Council and the Chairmen of the state medical society committees on industrial health. During this day there was presented what may become an historic document, a statement of "Guiding Principles for the Physician in Industry." Eventually and after indicated modification these guiding principles may become a supplement to the general code of ethics of the A.M.A.

It seems to be an increasing custom that any one major medical conference becomes the egis under which numerous ancillary conferences are conducted. At the Louisville meeting two related conferences reached decisions of far-reaching importance. The directors of the Industrial Medical Association declared approval of current proposals that certification within industrial medicine be obtained through the agency of a sectional board of certification within the structure of the American Board of Preventive Medicine. This does not mean that finality has been achieved, or any definiteness. Instead merely that approaches may be made to the American Board of Preventive Medicine with official endorsement since other industrial medical agencies likewise have extended approval. The second of the two mentioned conferences was that of the Interim American Board of Occupational Medicine. As one consequence the Chairman of the Board, Dr. Robert Kehoe, announced to the Congress on Industrial Health its intent to seek acceptance as a division of the American Board of Preventive Medicine. This action, while widely approved by individuals, was not unanimously favored.

The gracious feature of the Louisville sessions was a dinner honoring two retiring charter members of the Council—Dr. Anthony J. Lanza and Dr. Clarence D. Selby. These two physicians have been members of the Council from its inception in 1938. Their retirements led to the election of Dr. William P. Shepard as Chairman of the Council. The two vacancies arising on the Council were filled through the election of Drs. Charles F. Shook and Lemuel C. McGee.

At the dinner meeting on Wednesday evening, Dr. Frank H. Krusen, of Rochester, Minnesota, received the United States President's Award for 1953 for outstanding contributions to the rehabilitation and employment of the physically handicapped.

The remaining sessions of the Council reveal their tenor through their theme titles, such as "Industry and Medicine—Partners in Health"; "Are Workers Getting Healthier?"; "The Significance of Emphysema in Occupational Medicine"; "Keeping People at Work"; and "Prepardness for Emergencies."

More than at any time previously this Annual Congress of the Council on Industrial Health reveals to all industrial physicians that, in the Council on Industrial Health, they possess a constructive spokesman and interpreter for all of occupational health.

Silicone Protectives

—A CLINICAL EVALUATION

EDMUND F. FINNERTY, M.D., Boston

THERE is general agreement as to the need for an effective, non-irritating repellent film which will afford adequate protection for the worker's skin. Many cream and ointment formulations have been offered physicians, but most have been disappointing. These are either not sufficiently resistant to water and oil-soluble irritants, themselves irritating to the skin, or leave a greasy or sticky film on the hands which interferes with their proper function. Suskind[1] states "Although there are scores of protective formulations marketed in the United States, there are few reports in the American Medical literature of systematic clinical and laboratory evaluations of these formulations. For the physician who wishes to prescribe a protective cream, or the hygienist who requires one in a specific industrial operation, there is little to guide him in his choice."

Recently, with the advent of the silicones, the field of protective creams has undergone an enthusiastic boost and, for the first time, authoritative clinical and laboratory evaluations have been reported. Talbott, McGregor and Crowe[2] obtained good protection of the skin primarily against drainage excreta and maceration sources with a 30% silicone in petrolatum ointment. Suskind[1] found a 52.5% silicone in bentonite formulation to have "considerable protective value clinically against (industrial dermatitis from) light petroleum oils and irritants such as rust preventives dissolved in such media, against insoluble cutting oils, soluble coolants, aqueous solutions of sulfuric acid and metallic dusts. . . . Relative protection was observed clinically against low boiling point petroleum fractions such as Stoddard solvent and mineral spirits when the cutaneous exposure was intermittent and when the solvent contained a small amount of light petroleum oil."

The silicone fluids are polymerized methyl siloxanes derived from common sand (silica). They are inert and repel water, oil and most common external allergens and contactants to which the skin is exposed at home or in industry. They are non-irritating or sensitizing and have been found virtually non-toxic.[3,4]

The availability of silicone protectives with such promising properties is of immediate interest to a dermatologist with a large industrial practice. Our experience with the clinical evaluation of these compounds includes (1) the 30% silicone in petrolatum base described by Talbott *et al*,[2] (2) a plasticized nitrocellulose (collodion)—castor oil formulation containing about 2% silicone, and (3) the 52.5% silicone in bentonite* described by Suskind.[1]

Our experience with the 30% silicone in petrolatum protective, described by Talbott, McGregor and Crowe,[2] confirms it to have good protective value against urine, and rectal and vaginal discharges, and from drainage from colostomy, fistulas and decubitus ulcers. We have found it of little value against oil-soluble industrial irritants. Its film is excessively "greasy" on the hands and interferes with their use.

We have not found the plasticized nitrocellulose-castor oil formulation, containing about 2% silicone, of value as a protective in the limited number of cases we have tried it on. The use of collodion as a protective is not new and has always been disappointing. The addition of a small amount of silicone (2%) apparently has not improved this type of preparation. It is particularly of little value against water-soluble irritants. The clinical results obtained tend to confirm the indifferent resistance offered by its films, on glass slides, when immersed in water-soluble irritants.

Methods

THE evaluation of the 52.5% silicone in bentonite cream was made on over 200 referred cases of acute dermatitis. These gave histories indicating the dermatitis to be of contact origin. However, in only 109 was the contact irritant identified by selective patch tests or by re-exposure to the suspected irritant. This report is, therefore, limited to these 109 cases whose dermatitis recurred on re-exposure without protectives or where careful patch tests assured us that they would. The occupations of these patients are tabulated in Table I.

In every case the acute dermatitis was treated with wet dressings and then with soothing lotions, creams, etc., with or without suitable anti-

TABLE I.
OCCUPATIONS OF CONTACT DERMATITIS CASES

Occupations	Number of Cases	Occupations	Number of Cases
Maintenance Engineers	4	Clothes Operators	5
Mechanics	6	Bartenders	3
Machinists	16	Cooks	3
Grinders	3	Food Handlers	5
Lens Operators	2	Waiters	4
Gas Station Attendant	3	Housewives	12
Rubber Workers	3	Car and Dish Washers	5
Garment Spotters	3	Nurses and Nurses Aides	2
Hair Dressers	4	Laundry Workers	3
Printing Operators	6	Miscellaneous	8
Shoe-Shop Operators	8	Total	109

*Pro-derma® supplied by Westwood Pharmaceuticals.

sepsis. While under treatment, each patient was instructed scrupulously to avoid re-exposure. When the dermatitis had cleared to our satisfaction, each patient was allowed to return to work where he was re-exposed to the offending contactants. For diagnostic purposes, this was sometimes done without the use of protectives. At other times, each patient was furnished with a tube of Pro-derna® and instructed to apply the cream as a thin film over the clean dry skin of the exposed surfaces. When applied to the hands, the excess was wiped off the palms, with a soft towel or cloth, so as to prevent a "slippery" or "tacky" feeling. Applications were made once in the morning before work and once after lunch. Pro-derna films are extremely occlusive to the skin and should be removed after the period of exposure is over. Since the film is highly resistant to washing off with soap, but can be more easily removed with soapless detergents, each patient was furnished with a mild soapless cleanser (Lowila®) containing the detergent sodium lauryl sulfoacetate.

Re-examinations of each case were made two weeks and four weeks after re-exposure. The result was termed good if the skin remained clear and poor if the slightest recurrence of the dermatitis was observed. Table II lists the contact irritants identified and the results obtained with each.

Results

IT IS immediately evident from these results, and those reported by Suskind,[1] that the silicone-bentonite cream is not effective against solvents or fuels which dissolve the silicones. Only five of 12 cases were protected against emulsions and light cutting oils containing such solvents as kerosene. Not one of the 14 cases caused by gasoline and other solvents was benefited. The other four poor results in this group were due to embalming fluid, rubber cement, and brass polish.

TABLE II.
PROTECTION OFFERED BY PRO-DERNA AGAINST CAUSATIVE CONTACT IRRITANTS

Substance Classification	Actual Irritants	Number of Cases	Results	
			Good	Poor
Mineral Solvents and Fuels	Light cutting oils	12	5	7
	Gasoline, kerosene, turpentine, mineral spirits	14	0	14
	Others	4	0	4
Dusts	Rayon, wool, tea, carborundum, glass, finished plaster, sawdust, Portland cement, plastic powder, grinding rouge	8	8	0
		5	0	5
Oils and Greases	Heavy cutting oils	8	6	2
	Grease	4	4	0
Water Soluble	Soaps and detergents	32	22	10
	Foods	4	3	1
	Soda ash, painting spray, antiseptics	5	4	1
	Bar contactants	3	0	3
	Cold wave solutions	3	0	3
Other	Leather	3	3	0
	Fur	1	0	1
	Pruritus vulvae (Idiopathic)	3	0	3

TABLE III.
RESISTANCE OFFERED BY FILMS OF SILICONE-BENTONITE CREAM TO VARIOUS HOUSEHOLD MATERIALS

Contact	Amount of Film Removed	
	After 6 hours	After 24 hours
Water	None	None
Oxydol® 2%	None	None
Tide® 2%	None	None
Babo® 10%	None	None
Ajax® 10%	None	None
Clorox® hypochlorite—bleach	None	None
5% Lysol®	None	None
Silvo®—silver polish	None	None
Soda ash 10%	None	None
Household ammonia 28%	None	None
Sodium hydroxide 2%	Some Pitting	10%
Glass Wax®	None	None
Johnson's Glo-Coat®	None	None
Life O'Wood® polish	None	None
Kem Tone® (rubber base)	None	None
Kem-Glo® (oil base)	Washes off completely in 1¼ hrs.	
Johnson's Pride® (solvent type)	100%	
Liquid Veneer® polish	None	50%
Toni® Home Permanent	None	None
Toni® (Neutralizer)	20%	60%
Mineral oil	None	None
Rubbing alcohol	None	50%
Turpentine	100%	
Energine® dry cleaner	100%	

The protective cream is of definite value against irritant dusts. In eight of 13 cases, protection of the hands, arms, face and neck was excellent. The five failures were found primarily in occupations wherein considerable rubbing of the skin with the irritant dusts was experienced.

Protection against dermatitis caused by heavy cutting oils and greases was excellent. There were only two failures with 10 cases completely protected. Machinists and mechanics comprise all of the cases exposed to these irritants.

Pro-derna offered excellent protection against many water-soluble irritants. There were 22 patients completely protected against soaps and detergents while the results were poor in 10 others. Silicone creams resist washing-off with soaps and alkalis—they are more easily removed with synthetic detergents as used in dishwashing. The physician should remember this so that when detergents are encountered, the cream should be used before every exposure. The cream protected three of four food handlers. The one failure was in a poultry dresser. Three bartenders and three beauty operators are included in this group, although the particular offending irritants were not selectively identified, because of recurrence of the dermatitis on re-exposure. We cannot explain failure of the cream to protect any of these six cases.

The silicone cream gave complete protection against dermatitis due to leather in three cases. One fur worker was not protected. Three cases of pruritus vulvae of idiopathic origin are included. Not one of these was helped.

Laboratory Evaluation

KNOWLEDGE of the resistance properties of skin protectives to many water and oil soluble irritants can be gained by the laboratory immersion technique described by Suskind.[1] Thin films of the

TABLE IV.
RESISTANCE OFFERED BY FILMS OF SILICONE-BENTONITE CREAM TO VARIOUS INDUSTRIAL MATERIALS

Contact Irritant	Amount of Film Removed After 6 hours	After 24 hours
Cut Max® #31	None	None
Stuarts Thred®	None	None
Aluminum cutting oil	None	30%
Soluble oil	None	None
Sunicut® 102-S	None	None
Silver Chip®	None	None
Pillsbury® cutting oil	None	None
Slush mixture	None	None
Tripco® Oil	None	None
Sum® #31	None	None
Mettaloid® X-60	None	10%
Magnaflux®	None	100%
Cimcool® (coolant)	None	None
Lusol® (soluble oil coolant)	None	None
Sodium hydroxide 10%	Badly pitted	50%
Sodium silicate	None	None
Potassium dichromate (#13%)	None	None
Sulphuric acid 30%	None	None
Nitric acid (concentrated)	None	None
Salvasol®	100%	
Kerosene	100%	
Xylol	100%	
Carbon tetrachloride	100%	
Mineral spirits	100%	
Fuel UP-4	100%	

protective are applied to one side of clean, dry glass slides and these are immersed in the irritant liquid for 48 hours. The films are inspected at intervals and observations made as to whether they are intact or have dissolved or been washed off. While this technique does not duplicate the conditions under which protective creams are applied to the skin, it does afford a measure of what can be expected clinically. Our clinical results confirm Suskind's observations that the pattern of resistance shown in the laboratory immersion method roughly parallels the clinical observations.

Table III lists the resistance of Pro-derna films to household materials, and Table IV shows the resistance against industrial materials.

It will be noted that the protective cream readily dissolves in solvents and fuels and in cutting oils containing such solvents as kerosene. Protection against emulsified cutting oils such as Cimcool®, against alkalis, acids, soaps, and many other water-soluble irritants is good. Protection against heavy oils and greases is also excellent.

Comment

THE silicones offer an effective means of protecting skin against many water and oil-soluble irritants. Use of the straight fluids would offer the maximum protection to the skin. But most cases of contact dermatitis involve the hands, and films of the silicone fluids are very slippery and would interfere with their proper use. The bentonite-silicone mixture markedly cuts down on the "oiliness" of the silicones and provides a film that is not greasy or sticky. However, the fingers will smear glass or shiny metals, and this should be remembered in fine instrument work where this might be objectionable.

The very excellence of its occlusive properties suggests that the silicone cream should not be used on acutely inflamed or infected skin. Dyshidrotic skin also tolerates this film poorly. Occlusive silicone films should be removable, when not needed, without the need for harsh solvents. Fortunately, Pro-derna films can be removed with soapless cleansers such as Lowila Cake.

Wisely employed, the silicone-bentonite cream is an effective skin protectant against many water-soluble and oil-soluble irritants. It is a prophylactic measure designed—not entirely to eliminate contact of the skin with offending irritants, but to minimize such contact effectively enough to prevent the irritation which would otherwise occur. It should not be used to protect against solvents, fuels, or other irritants which dissolve its films. When in doubt, the physician should smear a slide with the cream and immerse it in the irritant fluid. If the film remains intact for from three to six hours, it is an accurate indication that the cream can protect the skin.

In 109 cases of dermatitis due to all the contact irritants encountered by this group, the silicone-bentonite cream afforded adequate protection to 55 cases, or 50%. Moreover, if from this group we remove those cases wherein the contactant was a solvent or fuel, and where we now know the cream should not be used, adequate protection was afforded to 50 of 79 cases, about 63%.

Summary

THE field of skin protectives has recently undergone an enthusiastic boost with the introduction of the silicone fluids into medicine. Authoritative clinical evaluations indicate that properly formulated silicone protective creams can protect the skin against contact dermatitis from many and varied irritants found in the home and in industry.

We have observed that a 52.5% silicone in bentonite cream (Pro-derna®) can protect 63% of those cases where dermatitis would otherwise most certainly recur.

Silicone protectives should be used with full recognition of their limitations. A laboratory immersion method which will give a fairly accurate indication as to the repellent effectiveness of silicone cream films against specific irritants, is described.

Silicone creams are not effective against irritants containing solvents and fuels. They should not be used on dyshidrotic skins or skins which are acutely inflamed or infected.

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Hydrocarbons as Anticancer Agents

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HISTORICALLY hydrocarbons were the first carcinogens. Today aromatic and polycyclic hydrocarbons are among the most powerful and widely used chemicals to produce malignant growths in laboratory animals.[10]

One of the most interesting developments of current cancer chemotherapy is the employment of hydrocarbons as anticancer agents. A survey of the medical literature during the last four years on the use of these chemicals to inhibit neoplastic growths in laboratory animals will disclose the strange dual role of this class of organic chemicals.

Wartman, Hill, Riegel and associates have released a series of six papers on the anticancer action of polycyclic hydrocarbons. They published two papers in 1950[17,18] and one in 1951[9] on the delay of methylcholanthrene carcinogenesis by painting the skin of mice with 1,2,5,6-dibenzofluorene. In 1951 these investigators[1,2] centered on the inhibited growth and increased latent period of 9,10-dimethyl-1,2-benzanthracene tumors in mice by the application of half a dozen benzanthracene derivatives. Last year they continued their study[3] of the inhibition of skin cancers in mice by mixtures of strong carcinogens, including methylcholanthrene, benzopyrene and several benzanthracenes.

Steiner and Falk[14] have reported that subcutaneous injections of a strong carcinogen (1,2,5,6-dibenzanthracene) plus a weak one (1,2-benzanthracene) resulted in only about one-half the tumor yield of the sum of their individual yields in mice.

Stanger, *et al*[13] inhibited dibenzanthracene tumors in mice by painting with 8-methyl-1,2-benzanthracene. O'Flynn[6] showed that small preliminary subcutaneous injections of methylcholanthrene inhibited the carcinogenic action of later larger doses of this tumor-inducing hydrocarbon.

Stock, *et al*[15,16] found polycyclic hydrocarbons effective in the inhibition of Sarcoma 180 in mice. In 1949 they tested 800 compounds by intraperitoneal injections, and in the following year they reported the results of screening 3000 chemicals.

Shear and associates[12] have included a number of hydrocarbons in their screening of 1000 chemicals for potency in producing damage to Sarcoma 37 by subcutaneous injections in mice. Lees and Lees[4] listed a number of hydrocarbons which inhibited S-37 tumors in mice when administered intraperitoneally in large doses. Dibenzanthracene, benzopyrene, methylcholanthrene and benzanthracene were all effective when given in near lethal doses.

Seligman, *et al*[11] reported that 10-methyl-1,2-benzanthracene and derivative related to the nitrogen and sulfur mustards inhibited the growth of transplantable tumors in rats and mice. Intraperitoneal injections were effective against S-37, S-39, leukemia, etc.

Miller, *et al*[5] inhibited liver tumors in rats fed 3'-methyl-4-dimethylaminoazobenzene by feeding the rats any one of the following hydrocarbons: methylcholanthrene, benzopyrene, dibenzanthracene, or benzanthracene. Richardson[7,8] in two releases reported similar inhibition of 3'methyl-DAB tumors by feeding rats methylcholanthrene, or administering the compound intraperitoneally, subcutaneously or vaginally.

[THE AUTHOR is indebted to the Army Medical Library and the Furman University Library for making available the original literature.]

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The Placebo

The need for controls in scientific work is not questioned. The principles are established and accepted, and the validating role of controls in scientific work is not disputed. Though there is practically no dissent from these premises, their observance is frequently sporadic, one of the reasons for which may be the belief that in a given investigation, controls are not necessary. The reason often given for failing to use a control procedure in an investigation is that the results speak for themselves. . . . An example of the doctrine that since some things speak for themselves they need not be re-examined, resides in the use of a placebo. A placebo is a substance, such as lactose, believed to be physiologically inactive, which is administered to individuals to whom a drug under investigation is also administered to learn the effect of that drug. Or, a placebo may be administered to an analogous group. By its very definition a placebo is inactive—or at least believed to be inactive. Therefore, the use of a placebo is sometimes questioned on the basis that since its use is not followed by a pharmacological effect or since a therapeutic effect is not expected from a placebo, its use would seem to be an emphasis of the obvious. The theory that the use of a placebo is pointless would be tenable, if no therapeutic effects were to have been observed from its use. But in many controlled projects, such as in the clinical investigations of khellin or of vitamin E in heart disease, an improvement in symptoms was reported from the use of the placebo. In other words, it was found that the proportion of cases which reported improvement of their symptoms was about the same for the individuals in the group which received the drugs, as for the individuals in the group who received the placebo. Apparently, the placebo was not inactive. Since a change of condition was induced in the group of patients to whom the placebo was administered it may be reasoned that the placebo was not without activity. Some component, either concrete or environmental, served to "activate" a placebo such as lactose, the effect of which is well known from past experience to be inactive. The "activation" may very well have been, and frequently is, the psychogenic factor. The psychogenic factor normally has a powerful effect on well-being or in disease. A potent psychogenic effect may be called forth from the mere act of administration of a drug, particularly if performed by an emphatic, or otherwise sympathetic, person. The effect may well be similar to that produced by the King's Touch as practiced during the Middle Ages, or by the laying on of hands. Seemingly the atavistic response of the individual cannot be denied. The mere administration of a drug may be followed by an improvement. A psychogenic response can call forth a physiologic one. It does not follow that the feeling of improvement is imaginary— it is real, much as the ills of the hypochondriac are real. While such an improvement may occur in the area of responses there is no change in the disease process itself. Therein lies the danger that a psychogenic response often engenders for though relief may occur, there may be little contribution to the fundamental disturbance. For that reason, and for other obvious reasons, the effect of drugs must be assessed on a soundly factual basis. —From "Controls in Research Projects," in *Monthly Bulletin of Di Cyan & Brown*, October, 1953.

Hydrogen Sulfide Eye Inflammation

—TREATMENT WITH CORTISONE

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OPERATORS in chemical industry plants are often exposed to the risk of occupational disease, particularly in the artificial fibre industry where hydrogen sulfide is given off in connection with the production process.

Both acute and chronic hydrogen sulfide and carbon disulfide poisoning occurs in such plants, acute conjunctivitis induced by hydrogen sulfide being the most frequent. Some patients, in addition, develop keratitis. Sometimes this occurs only after the conjunctivitis has persisted for a few days, but occasionally its onset is simultaneous with the conjunctivitis. This type of keratitis has been studied by an ophthalmologist who diagnosed it as keratitis punctata superficialis. According to the literature a characteristic of this keratitis is that the corneal epithelium remains intact. I have followed such cases of keratitis for seven years, both early and late stages, and found that the epithelium of the cornea is often readily broken and the surface of the cornea hence rough. It is as if a small or large epithelial vesicle had developed on the cornea and then ruptured. The edge of such a ruptured vesicle is readily discernible, and it is not unusual for the broken surface to cover practically the whole cornea. At this stage the patient has such severe pain in his eyes that he can neither sit nor lie but walks to and fro with his head bent, covers his eyes with his hands, and complains all the time. He is practically completely blind. He is unable to open his eyes and cannot move outside his room without help. He is afraid of having lost his sight. The disease picture is highly dramatic.

In the earlier years such patients were relatively frequent visitors to the mill doctor's consulting room, sometimes even during the night. It could happen that, the patient having got hydrogen sulfide into his eyes, he would decide to cure himself when his shift was over by taking a Finnish (steam) bath without reporting to the industrial nurse or the doctor. The bath never failed to aggravate the chemical eye inflammation and the patient experienced such severe pain that the inevitable sequel to the bath was a visit to the mill doctor. For this reason Finnish baths have for several years been prohibited patients suffering from the most acute phase of the disease.

In the earlier years cases of conjunctivitis were treated with pantocaine-adrenalin-zinc solution, and keratitis with cocaine and atropine. The severest cases of keratitis were given internally a fairly large dose of strong pain-relieving drugs immediately.

It soon transpired that zinc and atropine did not suit these patients. The zinc was dropped and atropine was replaced by scopolamine, upon which the therapeutic results improved considerably. Slight conjunctivitis was cured in two to three days, severe cases took one to two weeks. The patients with slight kerato-conjunctivitis were unable to work for one to one and a half weeks, the severe cases for two to eight weeks.

IN DECEMBER, 1951, I decided to try Cortisone for these so-called "gas eye" patients, and ever since I have used nothing else.

I used Cortisone acetate and physiological saline solution ana partes. Two drops of this solution per hour are instilled in the patient's eyes. If treatment begins in the morning the drug need only be applied two or three times during the first night. But if the treatment begins in the afternoon or at night hourly instillations of Cortisone are required throughout the night. After 24 hours the patient is like a new man, both subjectively and objectively.

While we previously had three phases in these eye diseases: (1) pure conjunctivitis, then (2) conjunctivitis which in a few days developed into keratitis, and (3) patients who developed keratitis immediately, we now have only two phases; phase (2) has been eliminated. Tnanks to Cortisone not a single case of conjunctivitis has developed later into keratitis. And all the keratitis cases have remained mild as a result of the treatment. The most important feature is that the cornea of each keratitis patient has remained intact and the severe painful conditions have not developed at all.

We have treated 237 patients with Cortisone. At the first aid station the nurses of the company have treated those "gas eye" patients whose symptoms, thanks to Cortisone, have remained so mild that it has not been necessary for them to consult the doctor or stay away from work. These patients total 180. I have treated all the severest cases, a total of 57. No one has been away from work for more than five days. The average number of working-days lost has been two.

IN ADDITION to the "gas eye" patients, I have used Cortisone to treat chemical eye accidents —patients splashed in the eye with sulphuric acid, lye, or viscose. Viscose is cellulose-xanthogenate dissolved in lye, the most dangerous liquid that can touch the eye in this mill. With the former therapeutical method the loss of working days for such patients averaged two to three weeks. I have treated 15 patients of this type with Cor-

tisone. None of them was away from work for more than three days, apart from one who received a jet of viscose full in the eye and has now been ill for over a month. But even his cornea is intact. Without Cortisone the eye would now be blind.

In the artificial fibre industry at least Cortisone has meant a long stride forward in the treatment of chemical eye diseases. Thanks to Cortisone I have not seen a single severe eye inflammation caused by hydrogen sulfide for 11 months. With the new drug the patients have been spared the severe pain.

We are indebted to Cortisone also for the reduction in the number of working days lost by eye disease patients.

Health of the Executive

EARLY in my career as a practicing physician, two experiences impressed me with the significance of the health of an executive. Mr. X, president of a thriving industry, had come to me at the age of 48 for a periodic medical examination. I found evidence of active coronary artery disease. This led to a conference in which his wife, his lawyer, and his stock broker asked me some pointed questions: How long will he be able to work? If he should become totally disabled how long will this state last? Neither of these questions could be answered in sharply defined terms. It was, however, possible to quote the statistics available 25 years ago which suggested that the average duration of life, for those in the condition of this man, was about five years. It was agreed, then, that he should be strongly advised and urged to consolidate his position in the stock market. At first he refused to do anything of the kind; six months elapsed before he decided to follow this advice. When he had paid all his debts, he was left with over six million dollars worth of securities, apart from the relatively small financial stake he had in the company of which he was president. Later, this company was bought by a group of Canadians from its English owners. Shortly after this deal was completed, an insurance broker inquired from me whether my patient would pass a life insurance examination. The new owners of the company wished to insure his life for one million dollars. I consulted with a colleague who was the medical director of a large insurance firm and confirmed the fact that Mr. X was not acceptable as a life insurance risk. This experience made an unforgettable impression on me. The health of each individual has far-reaching significance. It affects not only his own personal welfare but the lives and destinies of his immediate family, his business family and the community in general. The second of these early experiences occurred in 1928 when I heard the late Sir Henry Thornton comment on the need for an adequate medical department in the Canadian National Railways organization. He considered men and women, the C.N.R. employees, more important than any other element in assuring the prosperity of this national institution. "Surely," he said, "they merit at least the same kind of thoughtful care for maintenance of good health as is given to locomotives and other machines and properties used in rendering efficient service to the public." The C.N.R. medical clinic has functioned during the past 25 years with exemplary efficiency. It provides facilities for periodic medical examination of the executives once a year and encourages them to come at about the time of their birthdays. Some do, and other do not, avail themselves of this service.

—From "Too Many Executives Die Young," by HAROLD N. SEGALL, M.D., in *Health*, January-February, 1954; published by the Health League of Canada.

Evaluation of the Cardiac in Industry

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THE general practitioner, the internist, and the cardiologist cannot overlook the challenge presented by the problems of industrial medicine. Heart disease stands out poignantly as the leading cause of death in this country. As the incidence of heart disease increases, so must the problem of the cardiac in industry be faced by industry, physicians, heart associations, and enlightened lay groups.

In any discussion of the individual who has worked for a company for many years, who suddenly develops a cardiac condition, and then presents a problem of job placement, one is faced usually with one or two etiologic types of heart disease. Because of pre-employment physical examinations the rheumatic and congenital cases only infrequently become a problem. They are a problem when one faces the issue of initial job placement, but arteriosclerotic heart disease and hypertensive heart disease are the main problems of interest in industrial medicine today.

The industrial physician is faced with a number of intangibles with which he has to deal. Unfortunately, at present he cannot control some of these variables. They are as follows:

1. *The usual therapy.* It is distressing to the company physician to realize that the usual therapy is not aggressive, not modern, not thorough nor investigative enough, fails to get the patient's respect or has failed to detect all the vital issues of the patient's problem. The industrial physician may recognize these complaints, may find the employee is turning to him for counsel and advice and must be put to the test of tactfulness and silence in the face of something he would like to straighten out.

2. *The patient's cooperation.* The successful physician is judged not only by his knowledge, his skill, and his workmanship, but also by his ability to enlist the patient's support in a real and effective program. We recognize three types of cardiac patients: (a) The man who approaches his problem with dangerous disdain. (b) The individual who faces his illness with neurotic introspection. (c) Finally, the individual who gives his physician intelligent and wholesome cooperation.

3. *The cardiac evaluation by the industrial physician.* In order to know all facets of the case this study should include a good physical examination, an electrocardiographic tracing, a fluoroscopic examination of the heart, and probably a six-foot x-ray of the heart and lungs for filing and future comparison.

4. *The patient's history.* As detailed a history of the past events as one can expect from the private physician of the patient should be obtained. This, of necessity, has to be done tactfully and delicately. The local doctor's time is precious and he resents long phone calls or the completion of tediously long forms.

There are some rather candid facts about the whole question of the cardiac in industry which have to be dealt with:

1. In certain industries the unions are constantly exerting pressure on the medical and personnel departments. They are looking out for their people, and features of this function are indeed commendable. However, the Medical Department does not want to be pushed into giving one of their employees, who has become ill and subsequently returned to work, a job that will jeopardize his future health and life.

2. It is an accepted fact that sudden deaths in workers far more commonly occur in the unknown cardiac than the well-documented cardiac. In other words, the Medical Department's records on cardiacs, their periodic check of the individual, his follow-up by the family doctor, and finally good job placement may have protected the individual from the catastrophe that occurs to the man who does not know his problem.

3. Coronary occlusion resulting from sudden effort is a debatable question among cardiologists. It is known that a high percentage of occlusions occur at rest or in the early hours of the morning when the mean blood pressure is down. Available statistical figures indicate that only 2% occur with severe exertion.

4. There is really no way of classifying a patient with cardiovascular disease permanently by job analysis or preplacement examinations alone. His entire physical activity during a 24-hour period has to be evaluated and emphasis should be placed on frequent follow-up examinations to determine the influence of all of his activities upon his cardiac status. Industry rightly assumes eight twenty-fourths of the risk. But is industry responsible for the man who indulges in a clandestine affair, who insists on doing strenuous things about the house in his spare time, or who indulges in overeating, violent bursts of temper and alcoholism? How discouraging to the industrial physician to find that a man he has been following with hypertension spends his spare time, not in sensible recreation and rest, but in painting his house.

5. If care were taken of the often associated extra-cardiac problems in our cardiac patients, their ability to work would be much enhanced. This involves the application of good medical therapy, based on sound diagnosis and the co-

operation of the patient. Diabetes, alcoholism, obesity, anemia, vitamin deficiencies, cirrhosis of the liver, psychiatric problems, and thyroid dysfunction only jeopardize our cardiac's health and intensify the underlying problem.

6. The functional and therapeutic classification of the American Heart Association does not fully answer the problem of what a man can do or stand. There is always the individual case unlike any other case or group of cases.

7. The existence of superimposed cardiac neurosis makes decisions by family doctor and industrial physician doubly difficult. How hard it is to evaluate vague, sticking, left precordial pain due to an overlying neuro-circulatory asthenia in a known patient with essential hypertension. One has to wade through the overlay of psychiatric complaints to the final organic findings.

8. The industrial physician often finds himself not only under pressure from the patient but also from the personnel people. Theirs is not an easy task; for they have too few easy jobs for too many candidates. They are recognizing the increase in cardiac disability among employees, and yet cannot place them all in jobs which will protect their previous salary level.

9. Long range studies of cardiac patients in industry reveal a good report so far as work efficiency, accidents, absenteeism, work spoilage, job changing, and the need for special consideration are concerned.

10. The industrial physician is also put under great pressure by the accepted legal fact that compensation courts are favorable to the employee. Any remote connection between the illness or accident at hand and the job appears to be compensable in many states.

11. The final and perhaps the most delicate of all the candid problems is the patient's attitude. How is an individual going to react to a change in the dignity, the skill required, and the pay of his new job? On the one hand he appreciates that he has had to be given a less challenging and perhaps a more menial job for his own health and life protection. On the other hand, he is hurt, worried and a bit offended.

These 11 challenging points plague the personnel department, the Medical Department, the executive branches, the courts, the unions, and finally the patient in this whole situation. What shall we do with the man who develops a cardiac problem while employed by a company?

One finally comes to an evaluation of the individual worker, his disease state, and his prognosis. Hypertension is one of the leading medical problems attacking the middle aged man and woman. Industry rarely need worry about the patient with prehypertension or the neurogenic phase of hypertension. Could these people be taught how to think sensibly, live, act, relax, reduce weight and sodium intake, there need be no restriction on effort. Indeed, we need not be concerned with the patient with established essential hypertension whose vascular adaptation is fully maintained. Again wholesome cooperation in the basic fundamentals known about the causation and treatment of hypertension is desirable. Avoidance of tension, reduction in weight, reduction in sodium intake, and a new philosophic approach toward life will keep these individuals out of vascular trouble. In addition, never before in the history of medicine have such a host of moderately successful hypotensive agents been available to the medical profession. The hypertensive patient who demonstrates failing adaptation in some area in his body requires consideration in job placement. This may be manifested by involvement of the major sites, retinal, cerebral, cardiac, or renal. With the onset of failing adaptation industry must be careful. Again with an adequate history, with an encompassing physical examination, functional evaluation, utilizing sound techniques available will enable one to be guided wisely in the individual case. It is desirable to remember that males do not tolerate hypertension as well as females. It is also wise to remember that although 92% of hypertensive patients have the "garden variety" of hypertension, it is heart-breaking to miss a pheochromocytoma, coarctation of the aorta, pyelonephritis, or unilateral kidney disease.

The problem in arteriosclerotic heart disease or coronary arteriosclerosis is perhaps not as easy as with the hypertensive. Industry certainly cannot be held morally responsible for sudden deaths on the job in the unknown cardiac. Yet this occult coronary artery disease represents a real problem. More frequent physical examinations after the ages of 40 to 45 with electrocardiographic and roentgenologic techniques will smoke out some of these cases. But it is known that about 50% of patients at the onset of their angina pectoris will have normal electrocardiographic tracings. It is for this reason that the various anoxemia tests, the use of blocking agents, and finally the ballistocardiogram have come into vogue. The cardiologic world is searching for one certain method of detecting the patient with subclinical coronary artery disease.

Some clue to the potentialities of an individual for the development of coronary artery disease have been expressed in the heredity of the patient; the driving, compulsive, competitive personality of the patient; the body type which has been described as the endomorphic-mesomorphic type; possibly an associated elevated uric acid; and more finally in the lipid pattern of the blood. It is of some help to look at an individual with these points in mind and make a tentative estimate as to his potentialities for coronary disease.

The patient who already is known to have effort angina is an individual who pathologically has closure of some minor or not so minor coronary twigs. Everyone will agree that the patient with angina pectoris should be protected from extremes of weather and work. His doctor should be interested in what he does, how far he travels, how he plays, and other featuers of his life. Any effort which causes dyspnea and/or anginal pain is too much for this individual.

When one comes to evaluate the individual who has had a known occlusion, the industrial physi-

cian will undoubtedly have pertinent questions on which he would like information from the family doctor. Was the infarction extensive and transmural? Is it associated with hypertension, diabetes, or a bad family history? Did the patient have an easy or a complicated time? Was his infarction associated with shock, cardiac decompensation, a major arrhythmia, or any thromboembolic phenomenon? Was the patient hospitalized, and did he receive anticoagulant therapy? Is this his first attack or has he had trouble in the past? Finally, on the basis of his clinical information, how would the doctor classify the seriousness of the infarction? The height of the fever, the height of the sedimentation rate, the degree of leukocytosis and even the extent of the electrocardiographic changes can be used to give a rough estimate on this point.

Finally, with this information at hand the industrial physician embarks upon his own physical examination and cardiac evaluation when the man presents himself for return to work. The patient is questioned as to whether he is taking digitalis or quinidine. Basic cardiologic studies are done, and the following pertinent information obtained: Does fluoroscopy of the heart reveal any enlargement or a ventricular aneurysm? Does the electrocardiographic tracing suggest a recent extensive infarction or a serious conduction defect? Although the electrocardiogram is not a prognostic instrument, it is one of the items collected together to make a final sound conclusion as to how well this man is and what work he can do. Does the electrocardiographic tracing reveal cardiac irritability as evidenced by frequent extrasystoles?

One is then interested whether the patient is having post-infarction angina, whether any elements of decompensation are present, whether he is troubled with the post-infarction reflex dystrophy in the shoulder. Many men feel that the latter carries with it a more serious prognosis. Finally, what is the patient's attitude? Is he frightened? Has he adopted a philosophic attitude? Will he be cooperative and maintain good morale?

On the basis of this information obtained from the employee's practicing physician and the industrial physician's cardiologic evaluation, the decision to retire this man, to give him part-time work, to recommend his return to his old job, to recommend he try a less arduous task, will ultimately be made to the personnel department.

Realizing that such an evaluation requires a keen scope of cardiac knowledge on the part of the industrial physician, that his knowledge must be broad and wide as he is facing similar situations in the field of trauma, infectious diseases, malignancy, and other medical areas, still at the present level of our understanding and knowledge of the cardiac in industry, only by these methods can we protect the individual and the industrial organization from an unhappy and tragic future.

(Indianapolis General Hospital.)

Industrial Placement of the Diabetic

THE PROPER placement of the diabetic in industry depends upon cooperation between the industrial physician and the personnel department. The majority of large industrial organizations will employ a diabetic but place him in a non-hazardous job. When a veteran employee develops diabetes, he retains his job unless it is hazardous to himself or the public. Studies show that the work record of diabetics in industry is generally satisfactory as compared with non-diabetics. In our experience, with the exception of two individuals who had unusual complications, our diabetic employees had the same absentee record as non-diabetics. Dublin and Marks, in a study of 92 known cases of diabetes, showed excellent absence records in 40%, average in 19% and unsatisfactory in only 15%. Most diabetic workers are over the age of 40 and are valuable employees because of their long service and experience. Retaining them in jobs for which they are trained and in which they are experienced is good management. Workers who become diabetic seldom need to change their jobs, although in exceptional cases a shift may be desirable because of a change in the diabetic's physical condition. Hurwitz feels that the degenerative complications of the disease, especially peripheral vascular disease, make the diabetic unusually susceptible to trauma. It is interesting to note that our absentee records show that the time off for industrial accidents was no greater in the non-diabetic. A guiding principle in the placement of a diabetic is that he should not be in a position where, as a result of insulin reaction, he would endanger the lives of others as well as his own. Fowler recommended that diabetics not be permitted to drive planes, locomotives or buses, or work at heights. However, we permit diabetics who do not require insulin to drive, since we feel that they are not a public hazard. Except where the factor of public and individual safety is concerned and the potential danger of an insulin reaction exists, we feel that a diabetic is capable of doing any job a non-diabetic can do.

—HAROLD BRANDALEONE, M.D., and GERALD J. FRIEDMAN, M.D., in "Diabetes in Industry," published in *Diabetes*, The Journal of the American Diabetes Association, November-December, 2:6, 448, 1953.

Enteritis in Industrial Medicine

—CAROB FLOUR (AROBON) IN THERAPY

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GASTRO-INTESTINAL disturbances, including diarrhea as an important presenting symptom, are probably the most common and recurrent illnesses except for seasonal complaints of the upper respiratory tract. It is not medically correct to call diarrhea a disease since it is rather a symptom or symptom complex of a disease which may be caused by a pathogenic organism, by local irritants, or by psychogenic factors. However, in the industrial dispensary, we often hear the employees state their complaints in the form of a diagnosis with a simple "I've got diarrhea" or "I have the G.I.'s," and so for the present purpose, we will consider diarrhea as a prime cause of absenteeism, whether it be merely a symptom, a symptom complex, or a complete illness in itself. Certainly, what may start as a symptom may become the main cause of a person's disability. It is estimated that more than 4% of all non-occupational visits to industrial dispensaries are caused by diarrhea, based on our experience at Frankford Arsenal employing 12,000 persons.

Careful and scientific diagnosis will determine the cause of diarrhea in most cases, and this would seem the logical thing to do. Judging from the number of private practitioners who consider the diagnosis of "diarrhea" sufficient on a sick certificate, it is apparent that they consider an exact diagnosis as somewhat academic in most routine cases, and it must be assumed that the usual treatment follows the accepted "anti-diarrheal mixture" regime of bismuth and paregoric or its equivalent plus some slight dietary changes.

Reluctantly we must admit that this was the procedure in most industrial dispensaries until something better presented itself. True, we felt there was some justification for routinizing the treatment in industrial dispensaries because the philosophy behind our treatment of non-occupational illnesses was, and still is, to keep the employees on the job until the shift is over and then promptly refer them to their private physician. At Frankford Arsenal we make an effort to classify the diarrhea as one of three general kinds or at least as being from a demonstrable or non-demonstrable cause. We are not always successful in our efforts, but we believe we send most of the cases to the private practitioners with some clue as to probable cause and in this manner lighten his burden, help his treatment, and hasten the employee's return to work. We strive to classify each case as Infectious, Non-infectious or Psychosomatic. If possible we pinpoint it within these classifications as follows:

I. *Infectious:* (a) Virus, (b) Baccillary, (c) Parasites, (d) Streptococcus, (e) Salmonella, (f) Staphylococcus, (g) Botulism.

II. *Non-infectious:* (a) Food poisoning from certain plant or animal sources due to alkaloids, ergot, etc. (b) Allergy to certain foods or drink, as shellfish, eggs, etc. (c) Nutritional deficiencies. (d) Glandular. (e) Neoplastic. (f) Chemicals, Drugs, Radiation: (1) alcoholism; (2) cinchophen; (3) colchicine; (4) drastic cathartics; (5) atabrine; (6) heavy metals as arsenic, lead, mercury, cadmium; (7) salicylates; (8) antibiotics; (9) x-ray.

III. *Psychosomatic:* In this rather indefinite classification are included all those cases we see daily that are transient in nature and not related to demonstrable causes. The presence of these disturbances in the upper gastro-intestinal tract is very common and has been accepted as the price of modern speed. The tendency of the gastro-intestinal tract to respond to this emotional stress and strain is not limited to the stomach, but involves the intestines as well. Cases of this type are found most commonly in emotionally unstable and psychoneurotic individuals. These develop psychogenic symptoms as a result of environment to which they cannot adjust themselves either at home or at work—such as at jobs requiring a high level of quality and quantity of production; where the supervisor is a "nagger" or "driver"; where shop discipline is lax and much "kidding," "joshing" and practical jokes are directed against one with an inferior make-up; other conditions of the job which are particularly irking to some individuals.

We have more than an academic interest in making as accurate a diagnosis as possible in the shortest possible time. Such a practice helps reduce the period of the illness and also enables us to rule out or accept liability. The employee is especially interested in keeping on the job if he is on piece work or is expected to maintain a certain rate of production. The company is in-

terested in maintaining production and reducing the unit cost of the finished product.

For severe diarrheas requiring medical management, the matter of proper diet and bed rest is of the utmost importance. The regime prescribed by Fradkin[1] is excellent, combining the selection of a vitamin-rich, high-protein diet of optimum caloric value and the elimination of foods that are difficult to absorb or which stimulate peristalsis. Fried foods or those which experience has shown to cause indigestion or evolve an allergic response are avoided. However, in the industrial dispensary the complete medical management of non-occupational diarrheas is seldom, if ever, undertaken. In those cases where the industrial physician feels impelled to take over, he first eliminates the causes; by removing the man from contact with the causative agent, by improving the hygiene of the particular operation which is faulty, or, perhaps, by careful examination of food handlers and the removal of carriers. At Frankford Arsenal, the matter of food handlers is carried even further. The purveyors' establishments are supervised. The food is carefully inspected at its source, and the handlers are examined at the same time.

During the six-month period ending December, 1953, there were 517 cases of non-occupational and 109 cases of occupational diarrhea treated at the Frankford Arsenal Dispensary and classified as follows:

TABLE I.
CLASSIFICATION OF CASES

	Occupational		Non-occupational		Total	
Type	No.	%	No.	%	No.	%
Infectious	0	0	266	42.49	266	42
Non-infectious	38	6.07	182	29.07	220	35
Psychosomatic	71	11.5	69	11.2	140	22
Total	109	17.4	517	83.6	626	100

Having heard of the therapeutic value of carob flour (Arobon), we investigated the reports of various workers.[1-6] While most of the evidence we gleaned pointed to its efficacy in the treatment of infants and children, there was no reason to suppose adequate dosage would be non-effective in adults. The work of Fradkin[1] showed its usefulness in chronic diarrheas. We determined to test it on the diarrheas seen so frequently in our dispensary. The composition of carob flour (Arobon) follows:

Pectin, Lignin, Hemicellulose	22.0%
Starch	15.0
Crude Fiber	3.0
Sucrose, Reducing Sugars	50.5
Protein	3.5
Fat	0.5
Minerals	2.0
Moisture	3.5

The product contains 77 calories per ounce or approximately 21 calories per level tablespoonful.

The clinical test was initiated using Arobon powder, but a wafer was subsequently offered which is munchable and more acceptable to the average patient. In each case the dose was standardized at two tablespoonfuls of powder or two wafers. The patients were returned to their regular jobs with instructions to return to the dispensary in two hours if no relief was obtained. Those who returned were given a second dose and again instructed to return in two hours if not relieved. Those who returned the third time were referred to their family doctor with a note and were given sufficient Arobon to permit them to take a total of five doses, two hours apart. All were requested to report by phone or in person, the results of their treatment. The record of this clinical trial on 626 cases is as follows:

TABLE II.
RESPONSE ACCORDING TO ETIOLOGY

	Infectious		Non-Infectious		Psychosomatic	
	No.	%	No.	%	No.	%
Refusals to take	4	1.5	0	0	0	0
Controlled in one dose	58	21.8	178	80.9	74	52.9
Controlled in two doses	71	26.7	19	8.6	61	43.6
Controlled in 1-2 doses	129	48.5	197	89.5	135	96.4
Controlled in 3-5 doses*	30	11.3	13	5.9	3	2.1
Controlled in 1-5 doses	159	59.8	210	95.5	138	98.6
Unimproved in 5 doses*	92	34.6	7	3.2	2	1.4
Failed to report*	11	4.1	3	1.4	0	0
Total	266	100	220	100	140	100

*Additional therapy and medicinal management are included in these cases.

TABLE III.
SUMMARY OF ALL CASES

	No.	%
Refusals to take	4	.6
Controlled in one dose	310	49.5
Controlled in two doses	151	24.1
Controlled in one to two doses	461	74.0
Controlled in 3-5 doses*	46	7.4
Controlled in 1-5 doses	507	81.3
Unimproved in 5 doses*	101	16.1
Failed to report results*	14	2.3
Total	626	100

*Additional therapy and medicinal management are included in these cases.

Most patients found Arobon powder palatable. In cases of concurrent nausea, there were some complaints of non-palatability. In this group were also found most of those who were unimproved. Since we have been using the munchable wafers the complaints of non-palatability have diminished and it appears that the number of refusals will be insignificant (under 1%).

CONCLUSIONS: Industrial medicine is concerned with maintaining employees on the job, and diarrhea is recognized as a prime cause of absenteeism. Carob flour (Arobon) in the form of wafers or powder is the most effective antidiarrheal agent used at this dispensary. In the management of diarrhea, cases should be classified as to occupational or non-occupational origin, for statistical and legal reasons. Treatment should be started promptly while the employee is on the job, and he should be referred to his family doctor when the diarrhea persists. According to our standards, this involved all cases of non-occupational diarrhea not responding to two doses of Arobon.

Industrial hygiene and proper sanitation of cafeterias will eliminate most cases of occupa-

tional diarrhea. Psychosomatic causes of diarrhea can be reduced by the proper instruction of supervisory personnel in human relations. In nearly all cases Arobon is effective. It does not replace specific therapy, dietary management, rest or common sense but can be used along with any of them to advantage.

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Problem Drinking and Industry Conference

The Institute of Industrial Medicine, New York University-Bellevue Medical Center, and the Yale Center of Alcohol Studies, with four sponsoring agencies, held a Problem Drinking and Industry Conference at the Hotel Biltmore, New York, March 3, 1954. The Consultation Clinic for Alcoholism at the University Hospital, the Commerce and Industry Association of New York, Local 1-2, Utility Workers Union of America, CIO, and Local 3, International Brotherhood of Electrical Workers, AFL, lent their support to the Conference.

The meeting was held to commemorate the second anniversary of the Consultation Clinic for Alcoholism. This clinic had been established in February, 1952, when Consolidated Edison Company of New York volunteered to underwrite a large share of the cost of launching such a clinic at the University Hospital as a service to local industry. Shortly thereafter Standard Oil Company of New Jersey joined in the support and the use of the clinic facilities. In February, 1954, the Consolidated Edison Employees' Mutual Aid Society, continued the contribution that had been initiated by the Company in the previous two years. This clinic, the first to be devoted solely to the problem drinker in industry, was developed with the guidance of Dr. A. J. Lanza, Director of the Institute of Industrial Medicine. The purpose of the conference was to inform company executives, particularly those engaged in personnel work or industrial medicine, and leaders of labor unions who share with management the concern for the problem among their membership, and the responsibility of seeking its solution. The program dealt with practical experience in how best to recognize, evaluate and resolve the problem of alcoholism in industry.

At the morning session, with Dr. J. A. Lanza presiding, the speakers were: Ralph M. Henderson, LL.B., Field Representative, Yale Center of Alcohol Studies—"Steps to Alcoholism"; Selden D. Bacon, Ph.D., Director, Yale Center of Alcohol Studies—"Recognizing the Alcoholic in Industry"; and Dr. A. Z. Pfeffer, Director, Consultation Clinic for Alcoholism, University Hospital—"Rehabilitation: How It Works." A discussion period closed the morning session and covered questions on the development of alcoholism, the recognition of the hidden alcoholic in industry, and the experience of the Consultation Clinic in successfully rehabilitating almost 60% of its cases from industry.

With Dr. B. L. Vosburgh, Manager, Health Services, General Electric Company, presiding, the afternoon session dealt with some of the practical problems encountered by industries in developing and carrying out programs dealing with problem drinking among their employees. Dr. Vosburgh presented the approach of the General Electric Company, in his paper "Activating a Company Program." The other speakers were: Dr. S. C. Franco, Associate Medical Director, Consolidated Edison Company of New York—"Policies and Procedures: A Company Experience"; Ralph M. Henderson, LL.B.—"Reaching the Problem Drinker," and Dr. Robert C. Page, General Medical Director, Standard Oil Company of New Jersey—"Alcoholism and Industrial Health" (see page 144, herein).

Judging from the large attendance, the largest of any of its three annual meetings, the Conference could be considered a success. One hundred and fifty persons were registered and represented 55 commercial and business enterprises, as well as 10 local civic and municipal groups. The response has encouraged plans to conduct a two- to three-day Institute on Problem Drinking and Industry at the next annual meeting in March, 1955.

Lead and Lead Poisoning in Early America

—SHOT TOWERS—

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This is the last of a series of seven items, the totality of which constitutes a substantial history of lead and lead poisoning in early America. DR. MCCORD *is Consultant, Institute of Industrial Health, University of Michigan, Ann Arbor.*

IT IS satisfying to the imagination to believe the legend that the man who first poured shot dreamed of being in a rainstorm which rained shot instead of water droplets. Intrigued, he set about the making of lead drops by pouring lead through his wife's flour sifter, probably ruining it for future sieving purposes and thereby gaining her lasting enmity. To his astonishment, many were nicely rounded and of uniform size. More plausible is the speculation that more than one workman doing lead roofing or gutter work spilled the molten contents of his lead pot. Later, looking about at the ground level, he found that some particles of lead had assumed spherical shapes.

In any event, now and for a long time, small shot have been poured or dropped, not molded. Buck shot and lead bullets are molded; not so bird shot or "BBs"—dear to the heart of every boy with an air rifle—and many other small shot sizes. Although now a sizable commercial enterprise, the underlying principles are the same as for that first maker who poured molten lead into a strainer, allowing some such falling height as 150 feet and providing a vat of water below for quenching. At the beginning it was discovered that a little antimony and arsenic added to the mix made the lead more fluid, thus promoting uniformity.

Falling water drops, owing to the action of atmospheric pressure, assume the well understood pear-shape or tear-drop configuration. Not so lead. Its density and surface tension lead to almost perfect spheres, the size being determined by the mesh of the screen.

The sorting of the good shot from slugs and half-round imperfections involves another simple but fetching contrivance. It is only necessary to construct a sloping stairway of smooth glass or metal, but unlike the usual ramp type of steps a gap is introduced between each successive pair of steps. Containers of lead removed from the quenching bath are emptied upon the topmost step of the sorting table. The rolling shot, if perfect, moving in a straight line, gain such momentum that they leap the gaps and end up in bins at the end of the lowermost step. The imperfect laggards, rolling slowly, drop into the open slots and are remelted. The slugs will not roll and are handpicked. For polishing purposes, the shot are rolled in graphite.

The first American-shot knew no shot tower. Their makers found some convenient lofty bridge or cliff. Even natural bridges have been used for the purpose. Wells and mine shafts have proved suitable, the quenching tub sometimes being hung on a windlass. As to time, these beginnings more nearly coincide with the founding of the Republic rather than with America's Colonial years. Still, the period invites inclusion in this historical series.

Early Shot Towers

SINCE the evolution of American man-made shot towers was a gradual transition from the bluffs, bridges and mine shafts, it may be impossible to establish with precision the first shot tower that in no wise depended upon some natural facility. It is necessary to observe that the scanty writings concerned with early shot towers chiefly are striking through endless discrepancies as to facts. A difference of 70 years attends the designations of the first shot tower in this country. A few references indicate the dropping of shot in the Colonies prior to the Revolutionary War, quite possible since the original discovery by William Watts was in 1769 in England. A few historians foolishly recount the dropping of pointed bullets. That achievement would have astonished even the angels. Nearly every city has described its shot towers as "the first." Avoiding any designation of the certain "first," it is beyond debate that numerous shot towers sprung up over the land, the greater number of which long ago have disappeared as no longer needed. Some representative ones more nearly historical in importance will be mentioned.

Moses Austin (1761-1821), the Connecticut Yankee and pewterer, later the Virginia gentleman and lead miner, but more importantly in later years the fabulous lead monger of the Mississippi Valley, was a fecund technical writer and correspondent. He records the language of William (notice the unreconcilable different first

name below) Watts' patent, but inconsiderately omits the date. The patent grant reads:

"George the third by the Grace of God King of Great Britain France and Ireland King Defender of the Faith etc., etc., etc.

"Doth by these his Royal Letters Patent Grant unto 'Josiah' Watts of the City of Bristol—Manufactorer on Consideration of————sum in hand well and truely paid unto his Magesties Collectors of the Revenues for Granting Patents to such ingenious Artists and discoverers of arts by their Invention in such Improvements as may now or hereafter be beneficial to these Realms for the special encouragement of Arts Sciences and Commerce—for the space of fourteen Years to hold to himself his Heirs and administrators Solely. . . . By these his Magesties Royal Letters patent in full authority. His art of making Globe Shot; now patented to him and his heirs only for the space of Fourteen Years as Watt's patent Shot."

This information possibly was obtained for Austin's scrutiny by Henry Miller of Philadelphia in 1789 who recorded the process as follows:

"Take any quantity of pure pig Lead; and Melt down in Kettle first for the purpose as usual for Drop Shot. The quantity of aceripigmentum Viz Yellow Arsenic is one pound to 80 lb of Lead but this differs something from the Ductility of the Metal the Cornwall Lead requires Less than the Devonshire.

"The Height required in Casting is left very obscure, nothing more being Mention'd than about 40 feet would be required for small size to upwards of 80 for the Largest Swan Shot.

"Nor does said specimen explain anything Satisfactory respecting the formation of Tower more than it must be constructed high enough to perform the operation of Granulating the shot in its decent by the opposition of air it receives in its fall."

Later Austin elaborated upon the mechanical requirements of a shot tower as follows:

"By Experience I have found a Much Better Mode to introduce the arsnic and find the white much preferable to the Yellow from it(s) purity in strength. And that a material difference of the Height is required in the Climate of America in the Different Seasons of the Year.

"After being prepared with a proper Building for your purpose if with communication of a stream of water so much the better. Wherein must be a Capatious high Chimney, or more; large enough to contain 1 or 2 Furnaces of Melting pots a reverberating Temper furnace and Drying pans provide 2 Casting Tubs strongly Iron whooped provided with two Brass Cocks one to supply Cold water and the other to Let of the Hot with a strainer near the Bottom.

"Shall add but little of the Construction of these utensils as they are better understood by an artist than Described more than the Kettles should not be less than 2 feet Diameter and not more than 1 foot Deep thick and Sound Made. The Casting tubs not less than 2 feet 4 inches Diameter and not More than 2 feet 2 inches above Ground for the Ease of the Caster.

"The Temper Furnace remains a Secret to the Trade only and the Drying pans may be Constructed of any size in proportion to the works in the most convenient situation of the factory."

Some obscurity attends the date of the Watts' patent. It appears that his discovery was made in 1769 as a result of his experiments of pouring molten lead from the tower of St. Mary Redcliffe Church in Bristol. Presumably his patent shortly followed, although more than once the year 1782 has been mentioned as the date of the patent. In truth, "English Patents—Abridgements of the Specifications for Firearms & Ammunition 1588-1858" records as follows, as quoted from Holmes:

"A.D. 1782, December 10. — No 1347.

WATTS, WILLIAM—Making small shot solid throughout, perfectly globular in form, and smooth, &c."

(Only Austin introduces the first name as "Josiah." This may have been due to the faulty copying of Henry Miller.) In any event, his patent was sold to a firm of shot-makers for 10,000 pounds sterling. This company promptly erected a shot tower which still was in operation in 1947. Without debate this was the first shot tower. During the 14 years of life of the patent, this company made enormous profits, but the acumen of the erstwhile shrewd plumber Watts failed him, since he lost everything in dubious real estate transactions.

The significance of Watts' discovery was revolutionary. Prior to that time fowling pieces of the "scatter" type long had existed. The "shot" were handmade by cutting sheet lead into small cubes and then grinding them in a tumbling mill, then called a "rumbler," to some degree of roundness. Actually, the shotguns of the period, apart from the larger molded shot, fired "slugs."

Austin's seat in Virginia was at Wytheville where he mined lead. Near that town was erected a shot tower, probably not in Austin's time, but later about 1820. This structure, which is a conspicuous and still picturesque square stone tower overlooking New River at Jackson's Ferry, is as medieval in appearance as any Rhine fortress.

In 1797, Austin moved to Missouri where he obtained control of extensive lead deposits at Mine a Burton. He built his shot tower there in 1799. Within a few years at least three shot towers, but only partly man-made, operated around Herculaneum. The foremost shot-maker was the French exile, John Nicholas Maclot, who raised his tower about 1809. Shot from this tower was sent to the armies of the United States in the War of 1812, and the victory of New Orleans in 1815 was said to have been won with bullets manufactured there. Projecting platforms over the Mississippi River bluffs constituted the only man-made portion of the shot works. In 1819, Henry R. Schoolcraft, in a lengthy description of the crude "towers" at Herculaneum, records:

"Shot of the largest size require to be dropped from the greatest height, say 140 feet, while the small sizes are only suffered to fall about 90 feet. One man will smelt and cast, after the lead is prepared by alloying it with arsenic, from 4 to 5,000

lbs per day. To polish these will occupy him 9 days. The polishing is done by putting a quantity of shot into a hollow cylindrical wooden vessel or barrel, which is fixed on a shaft and turned by a crank. The action of the shot against each other, converts them into perfect spheres, and a little plumbago which is added gives them a gloss, in which state they are ready for market."

Decades later when the shot works long were forgotten, a high quality of glass sand was discovered so that the Joachim creek area with Herculaneum and Crystal City on its banks became notable in flat glass production. So early as 1820, William Williams, in Geneva, New York, importuned Moses Austin to engage in leaded glass manufacture in Missouri, indicating that a capital of $4,000 and not more than $10,000 would equip such an establishment.

Although Moses Austin seemingly was established far away in the wilds of the middle west, he was still in touch with trade demands of the east, as reflected in this letter:

"Adams Trinno to Moses Austin

Charleston 10 February 1814

Sir

Having lost my partner Mr. Cox some time ago, I address you in my own name, and reply to your favor of the 2nd last month, received two days ago, Stating your being interested in the making of Shot and roll lead, both are in demand, but even our present high rates, would not pay carriage from Nashville and during the war, we have no Safe water Conveyance, from New Orleans—$20 per hundred has been paid for Cotton to the northern States and I presume full that would be ask'd from Nashville to this—the present price is 18 to $20 for Shot and rolls, and when peace, will drop to 12 @ 15$. The Sizes of Shot most Saleable are from the Size above mustard to BB viz Bird, Snipe, High duck and Eristol Blue for Turkeys—with some Buck of moderate Size, the rolls are generally in demand, the pig or bars are now got in our own State, but not of a good quality and but little used—I regret that I cannot give better encouragement to industry—if any favorable change I will drop you a line on the Subject—

Respectfully am Sir

Adam Trinno (Rubric)

Mr. Moses Austin Mine a Burton Missouri

My usual Signature is A. Trinno (Rubric)"

The better known historic shot towers are located along the Atlantic seaboard. Baltimore, New York, and Philadelphia raised their shot towers. In Philadelphia, Bishop and Sparks advertised in *The Aurora* of October 20, 1808, that they were ready to furnish American patent shot. This tower was located at Front and Carpenter streets and was known as the oldest, best-appointed, and most successful of the drop shot-works in the country. This building still stands. Seven days after Bishop and Sparks appeared in *The Aurora*, Paul Beck advertised in the same paper that he had erected a "patent shot-factory, upon as large a scale as any in Europe." This factory, since torn down, was situated between Arch and Race streets and Schuylkill and Second streets. When news was received in Philadelphia in February, 1815, of the signing of the peace treaty with England, a general illumination of the town took place in celebration. Paul Beck's shot tower was "like a pillar of fire, the top being crowned with one hundred and sixty lamps."

Baltimore, too, had its share of towers. In 1823, a shot tower, 187 feet in height, was raised by Jacob Wolfe on North Gay. This tower was torn down in January, 1845. Still standing is the tower erected by the Phoenix Company at the corner of Front and Fayette streets in 1828. This substantial shaft was 234 feet 3 inches from the pavement. At the bottom the diameter was 40 feet while the top was 20 feet. The stone foundation wall, 10 feet thick at the bottom, narrowed to six feet at the top. The brick work four and one-half feet thick for 50 feet diminished four inches in every story until at the summit, it was only 20 inches thick. The whole structure was built without scaffolding.

In New York, George Youle built his shot tower on East River near 53rd street in 1823. This building stood until 1917. Its record was three tons of shot a day. Robert McCullogh's tower on Beekman street was erected in 1856 and was torn down in 1907.

Modern Shot Towers

THE present day shot tower is but a glorification of the earliest sieve, the melting pot, the essential elevation and the inevitable vat of water far below. This glorification may lead to a 10-story building some 125-150 feet tall. In truth, some modern shot towers do not equal the height of some of the earlier ones. Since ordinary pig lead is unsuited for shot dropping, on the ground floor ordinary lead pigs are recast with a suitable content of antimony and arsenic. These pigs are transported by an elevator to the top of the structure where the melting unit is located. The simple sieve has given way to more sturdy structures varying in perforation size suited to the shot size needed. Pouring and dropping are continuous, thus, literally making true the "raining of lead" of the original dreamer. The dropping distance, some 100 feet, may be partly enclosed by a tube not unlike the well known metal smoke-stack. At the bottom is the chilling vat of water. Therefrom runs a chain bucket system upwards for some five floors where after drying, the process of polishing, sizing and sorting begins, the action working downward. Contrary to earlier statements, the size of the shot is not precisely uniform. The grading operation leads to well nigh parity in size. In the modern shot tower, the melting temperature maintained is approximately 700° Fahrenheit. The content of arsenic and antimony respectively approximates 1% and 2-6%. Some of the sieving pans have as many as 2400 perforations. Number 7 shot, which is 0.10 of an inch in diameter, is dropped from a pan with perforations 0.033 of an inch in diameter. The diameter of the perforation always is smaller than the diameter of the form shot. With molten

lead flowing at the rate of five tons per hour through the dropping pan for Number 6 shot, almost 10,000 shot are formed every second (Depperman, "Shooter's Choice," 1952). The spongy coating of lead oxide that forms on the dropping pan favors uniformity in roundness, but that dusty coating constitutes a greater threat of lead poisoning than the metallic lead itself. Rarely, a blast of air is forced upward through the sometimes present cooling tube or even in the absence of such a tube to facilitate chilling. This practice reduces the required falling distance.

Shot Towers and Lead Poisoning

ONE of the traditions of the toxicology of lead is that metallic lead is not poisonous. That this is a fallacy over and over has been established. Otherwise, the great lead epidemic in the automobile industry near 1935 never would have occurred. That time marked the transition from the clumsy box-car type of automobile body to the graceful airflow designs of the present. For some types of cars, it was necessary to apply as much as 80 pounds of lead-tin solder for the filling in of dents and crevices. The mechanical grinding to smoothness produced gross air contamination by fine lead dust. It may be contended that those fine particles quickly will oxidize, but it remains that the ultimate malefactor was metallic lead.

Notwithstanding this recognition that metallic lead per se is a toxic agent, it does not follow that at any time shot towers produced significant lead poisoning. Equally is the need for emphasis that during the Colonial period, small shot was not the ammunition of common use in either warfare or hunting. Only later did the shotgun come into its own. The musket was the firearm of the Colonial period.

Observation in modern shot towers has led to the disclosure that in the sorting, grading and finishing of shot, there may arise accumulations of settled and floating dust thereabouts. Neglect of suitable workplace sanitation in this portion of shot towers could lead to lead poisoning.

For the appraising purposes of this series of historical articles on lead poisoning in Colonial America and early United States, the conclusion appears to be warranted that shot towers were not notable offenders.

Industrial Health Programs

AMERICAN Institute of Management has recently released a report on current attitudes toward health of industrial workers. The Institute believes a health program with a Director reporting to top management is not only a good public and labor relations device but is a cost-reducing method of considerable importance. One plant is reported to have saved $4.08 for each dollar spent on its health program. This saving was realized in reduction of absenteeism and lowered labor turnover. An industrial physician needs to be adaptable to teamwork in a plant and is required to have more than average administrative ability. To the employee, he represents a personification of management, hence must be accomplished in morale building as well as in medical care. He should have a knowledge of toxicology and be familiar with engineering and chemistry. He must be constantly aware of hazards imposed by new materials and new techniques. He needs to know a great deal about occupational diseases, their early detection, and their prevention. Medical Departments in industry are expected to conduct pre-employment examinations, evaluate symptoms of occupational diseases, and make certain periodic examinations. Some plants use a type of multi-phasic screening which will weed out pulmonary, cardiovascular and metabolic sufferers. Plant surveys for dangers in working conditions automatically become the duty of the industrial physician. It is not surprising that management is beginning to look beyond the realm of strictly industrial medicine into the problem of non-occupational disability. It is estimated that the nation lost $27,000,000,000 from various types of disability during the year 1947. Faced with a figure of such magnitude, the average executive is quite likely to start looking for a way to stop such loss as his plant might be suffering from this cause. The report of the American Institute of Management puts it succinctly when it says, "It is natural, therefore, that in-plant services be extended to include attempts to prevent non-occupational illness and to protect against non-occupational injuries. Typical of these services are home and hospital visits by the nurses, counseling of employees on matters of general health, multiphasic screening examinations to detect such conditions as diabetes and heart disease, and programs for the conservation of vision and hearing. Health education is a function not to be overlooked. . . . Management is learning that to wait until such services are demanded by the union is to lose the industrial relations value which they would have if provided without prodding. . . . The time has passed when any company can afford to neglect industrial health if it wants to progress."

—Editorial, in *Northwest Medicine*, February, 1954.

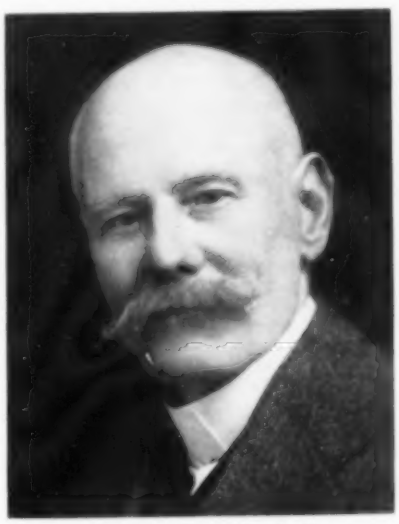
Industrial Medicine's Hall of Fame

R. Prosser White, M.D., M.R.C.S.

A BRITISH INDUSTRIAL MINING TOWN PHYSICIAN WRITES THE FIRST CLASSIC ON OCCUPATIONAL DERMATOLOGY

Prepared by ROBERT T. LEGGE, M.D., Berkeley, California

IT WAS my good fortune while attending the Royal Institute of Public Health as an American delegate at Bordeaux, France, in 1924, to lunch with Dr. R. Prosser White, a remarkable and fascinating man. A general practitioner in his native industrial Lancashire town of Wigan, quite apart from any medical school center, he acquired an international reputation as the foremost specialist in industrial dermatology. He related, in the most interesting manner, incidents of his life as a certifying factory surgeon and as a practical industrial physician at Wigan where he was born and where his father Dr. James White practiced medicine in the collieries and cotton and chemical factories, and where he also practiced.



R. Prosser White, M.D., M.R.C.S.

Dr. White possessed a delightful personality, a gracious and kindly spirit, carried himself upright, and spoke with authority. As a philosopher, humanitarian, and benefactor to his own town he held first place, and in his writings he showed a keen knowledge of medicine and of men.

He was educated at Clitheroe and took his medical degree at Edinburgh University in 1896, then served as house surgeon at Halifax. He was married to Miss Clarice Rougetel, daughter of a Jersey clergyman. Two sons were born to them. Prosser White was a member of the Royal College of Surgeons. He was past-president of the London Dermatological Society of Manchester, Medical Society, and vice-president of the Certifying Factory Surgeons Association, and a member of the Permanent Committee for the study of occupational diseases constituted under the League of Nations. He was also associate editor of the *Journal of Industrial Hygiene*, published in the United States.

The Royal Albert Edward Infirmary at Wigan honored him by appointment as consulting dermatologist and senior physician. This afforded him the means of a first hand knowledge of cutaneous diseases associated with the local industries of which he was the physician. As early as 1901, while the medical officer at the Roburite Explosive Works, he experimented on himself by the process of rubbing small quantities of an ointment containing dinitrobenzene on his skin, the result of which showed unmistakably that it was quickly absorbed through the skin. Of the voluminous number of papers he published, his earliest was on nitro- and dinitrobenzol based on his examinations of patients. His classic book entirely devoted to occupational dermatology, its prevention and treatment, with an account of the trade processes and agents which give rise to its various forms, was published in 1915. The work was entitled "Occupational Affections of the Skin." Four editions were printed; to the last ones he added the title "The Dermatergoses" (Greek for affections of the skin due to work). Professor E. L. Collis, referring to his book, said: "It is a monument of painstaking assiduity; it describes every known occupational disease of the skin, giving particulars of the trade processes and the responsible agents." It is the accepted authority on the subject, and has been translated into several languages.

AT THE tercentennary celebration of Ramazzini's birth held at Milan on October 4, 1933, he delivered an address on Ramazzini, the Father of Industrial Medicine, in which he paid Ramazzini a great tribute as physician, teacher, author, and descriptive investigator. "It is astonishing," he said, "how this 17th Century physician accomplished so much without the conveniences, the machinery, or the synthetic art of the chemist." Notably he singled out Ramazzini's meticulous observations, and stressed the importance laid upon the cutaneous stigmata of man's trades, such as bakers, bricklayers, and sailors—as examples, the color of the skin, itching, bites of vectors, also the classic description of dermatitis venenata.

Dr. White was a great admirer of Ramazzini. Of his spirit of adventure and inquiry, he quotes him in his paper, "We physicians are therefore bound in duty to preserve the lives of these work-

men by investigating their diseases, and propose caution and remedies for the removal of them. Catholic in his humanity and humble in his wisdom, Ramazzini is not ashamed of the acquaintance with the states and conditions of the meanest of tradesmen, having nothing more at heart than the discovery of the Truth." That example Prosser White followed in his daily practice and in the preparation of his classic book.

One of his hobbies was music. He founded the Parish Church Musical Fund for the purpose of ensuring an annual organ recital in his beloved town, often securing some famous organist. He was also interested in the training of the youth of his community, and founded a traveling scholarship in Wigan Mining and Technical School so that students could spend three months on the Continent of Europe to study their special subjects. Being interested in the history of his town he commissioned young artists to paint and make drawings of old landmarks of which some 55 were collected and preserved in the public library. He also founded a medical book trust fund to purchase rare and original books of research in medicine and expensive items on the history of medicine, these constituting a priceless asset for the Wigan Library.

ON January 4, 1934, Dr. R. Prosser White died at Southport at the age of 78. He won international recognition as an investigator in industrial dermatology and other occupational maladies, and as a student of conditions of employment with which he became familiar. Above all, as a fine human being he has enriched our professional lives.

Medical Advisory Committee

NATIONAL Fund for Medical Education, in its "Program for 1954": "A major step in strengthening the link between industry and the medical schools was the organization of the Fund's Medical Advisory Committee. Under the leadership of Dr. Robert Collier Page, Medical Director, Standard Oil Company of New Jersey, and Dr. Earl C. Bonnett, Medical Director, Metropolitan Life Insurance Company, 442 Medical Directors and industrial physicians are endeavoring to forge closer ties between medical school administrators and the nation's major corporations. While business has recognized the importance of and supported good health services in communities where it has plants, it has not been fully aware of how directly dependent all these services are on the medical schools. Nor has business apparently seen, until recently, that the threat to the medical schools is an implied threat to both economic prosperity and national strength. The Page-Bonnett Committee provides a much needed link between those who teach medicine and those who practice it in industry. From it undoubtedly will come recommendations which will aid both industry and the medical schools. The Committee strives to: (1) Interpret to industry the needs of the medical schools. (2) Interpret to the medical schools the needs of industry. (3) Stimulate mounting corporation support of the National Fund on an annual basis. To achieve these objectives, the Committee obtained the cooperation of the major related professional groups such as the Industrial Medical Association; American Foundation of Occupational Health; A.M.A.'s Council on Industrial Health; Association of Life Insurance Medical Directors; American Industrial Hygiene Association, and American Association of Industrial Nurses. In all of its studies and operations, the Medical Advisory Committee has had available to it the assistance of the Medical, Educational and Scientific Advisory Council of the Fund. This Council consists of 14 distinguished university presidents who preside over universities presently responsible for medical schools. Also on the Council are three members of the Association of American Medical Colleges' Executive Council and three members of the American Medical Association's Council on Medical Education and Hospitals. Through this Council, the Fund is in a position to draw on educational and medical advice of the highest order. The first of its series of regional meetings bringing together business leaders, industrial physicians and representatives of the medical colleges was held by the Medical Advisory Committee in Los Angeles last April. Additional meetings of medical school deans and industrial physicians were held in New York and Pittsburgh. The success of these early meetings—and the feeling among those present that they filled a real need in dispelling the lack of understanding that has separated industry and medical school administrators—has led the Committee to plan similar meetings during 1954. Conferences have been scheduled as of January for Boston, Minneapolis, and Chicago. At Chicago the Committee will be responsible for an entire session at the Thirty-Ninth Annual Meeting of the Industrial Medical Association at Hotel Sherman, Tuesday afternoon and evening, April 27, 1954."

Graduate Training in Occupational Medicine

REPORT OF COMMITTEE ON EDUCATION AND TRAINING
INDUSTRIAL MEDICAL ASSOCIATION, 1954

THIS report deals with the graduate training opportunities for physicians in Occupational Medicine in the various universities. It is presented by the Committee on Education of the Industrial Medical Association as a summary of current activities in the field, and to assist physicians seeking graduate training. The details of the curriculum offered by the various programs can be found in the two earlier reports, or by writing directly to the individual university.

Graduate Training Programs

NINE universities offer graduate training in occupational medicine for physicians. The programs are diversified and allow the individual physician to select the course of study which best meets his special needs. For the novice physician who has just completed his formal medical education and internship, courses of study can be found which vary from three months to three years in length, and may lead to a variety of graduate degrees. For the physician who already has considerable experience in the field of industrial or clinical medicine, specialized or individualized graduate programs are available. This report deals only with programs which are suitable for advanced degrees. Many short-term courses are available as well and are the subject of a later report.

Physicians in Graduate Study, 1954

AN ESTIMATED 42 physicians are currently enrolled for a graduate degree. This compares with 20 physicians in 1952 and 30 physicians in 1953. These degree courses vary from nine months to 36 months. In the nine universities offering graduate study in occupational medicine the type of degree earned differs considerably and may bear the title of Master or Doctor of Public Health, Master or Doctor of Science, Doctor of Philosophy, as well as the newer degrees, Master or Doctor of Industrial Health or Medicine.

Fellowships and Tuition Costs

FELLOWSHIPS are available for physicians to pursue graduate study in occupational medicine in at least four of the universities, namely, Cincinnati, Michigan, Pittsburgh, and Yale. Other universities undoubtedly have fellowships which may be used for study in the field of occupational medicine. The Atomic Energy Commission offers additional fellowships for a specialized program in radiological physics and industrial hygiene. This course of study is offered by the University of Pittsburgh Graduate School of Public Health and by Harvard University School of Public Health, and leads to the Master's degree in Industrial Hygiene. In general, where a fellowship is available the university waives the tuition fee. Courses of study vary considerably in their costs, from $400 to $1200 per academic year.

GRADUATE STUDY IN OCCUPATIONAL MEDICINE 1954

University	Degree	Physicians Enrolled	Months of Study
Cincinnati	Doctor of Industrial Medicine	13	36
Columbia	Master of Public Health	6(a)	9
Harvard	Master of Industrial Health	3	9
	and		
	Master of Public Health in Industrial Medicine	1	9
Johns Hopkins	Master of Public Health		
	Master of Science; etc.	1(b)	9
Michigan	Master of Public Health	2	9
	Degree plus Residency	2	24
New York	Master of Science		
	and/or		
	Certificate of Study	0(c)	9
Pittsburgh	Master of Public Health	7	9
	Doctor of Public Health	1	24
	Doctor of Philosophy	2	36
Rochester	Master of Science	3	12
Yale	Master of Public Health	0	12
	Master of Science	0	12

(a) Four physicians have other major fields of study.
(b) Advance estimate.
(c) No full-time students currently. Short courses and special lecture series well attended.

Graduate Study

FOR physicians wishing to obtain detailed information, the following offices may be contacted for admission requirements, description of program, and other information:

Cincinnati: Secretary, Institute of Industrial Health.

Columbia: Office of the Director, School of Public Health, Columbia University.

Harvard: Harvard University, School of Public Health.

Johns Hopkins: Office of Director, School of Public Health, Johns Hopkins University, or, for special inquiries, Dr. Anna M. Baetjer.

Michigan: School of Public Health or Institute of Industrial Health, University of Michigan.

Committee on Education and Training: A. G. KAMMER, M.D., Chairman, University of Pittsburgh Graduate School of Public Health; O. T. MALLERY, JR., M.D., Institute of Industrial Health, University of Michigan; L. C. McGEE, M.D., Hercules Powder Company, Wilmington, Delaware; J. WISTER MEIGS, M.D., Department of Public Health, Yale University School of Medicine; I. R. TABERSHAW, M.D., Columbia University School of Public Health; H. A. VONACHEN, M.D., Caterpillar Tractor Company, Peoria, Illinois.

MALLERY, O. T., JR.: "Graduate Education for Physicians in Industrial Health and Occupational Medicine." *Indust. Med. & Surg.*, 21:3:101 (March) 1952.

COMMITTEE ON EDUCATION AND TRAINING, Industrial Medical Association: Graduate Training in Occupational Medicine. *Indust. Med. & Surg.*, 22:4:169 (April) 1953.

Graduate Education: *Indust. Med. & Surg.*, 22:10:466 (October) 1953.

New York University: Dean, Postgraduate Medical School, 477 First Avenue, New York 16.
Rochester: Graduate School, or Dr. Henry A. Blair, Director, University of Rochester Atomic Energy Project, P.O. Box 287, Station 3, Rochester 20, New York.
Pittsburgh: Secretary, Graduate School of Public Health, University of Pittsburgh.

Candidates, and Degrees in Industrial Health to be Received in 1954

John D. Bealer
M.D., Jefferson, 1948
Master of Public Health
Pittsburgh, 1954

Hugh Chavern
M.D., Pittsburgh, 1948
Master of Public Health
Pittsburgh, 1954

Ahmad Ali Khalifa
M.D., Fouad I (Egypt), 1947
Master of Public Health
Pittsburgh, 1954

John F. Osterritter
M.D., Pittsburgh, 1950
Doctor of Philosophy
Pittsburgh, 1954

Mary G. Robbins
M.D., Tufts, 1949
Master of Public Health
Pittsburgh, 1954

Norbert E. Rosenwinkel
M.D., Louisiana State, 1949
Master of Public Health
Pittsburgh, 1954

John W. Sherman
M.D., Temple, 1952
Master of Public Health
Pittsburgh, 1954

Joseph W. Tauber
M.D., Prague, 1930
Doctor of Public Health
Pittsburgh, 1954

Captain Brock R. Brown, RCAF
M.D., Toronto, 1930
Master of Industrial Health
Harvard, 1954

Marcus Melvin Key
M.D., New York, 1952
Master of Industrial Health
Harvard, 1954

Kenneth Alexander Nesbitt
M.D., Albany Medical, 1951
Master of Industrial Health
Harvard, 1954

D. E. Rosengard
M.D., Tufts, 1945
Master of Public Health
Harvard, 1954

Industrial Hygiene—Health or Labor?

RECOGNIZE the Department of Labor as the appropriate agency to administer laws establishing basic standards in the field of minimum wages, maximum hours and general working conditions. For this purpose, and to round out the present authority of the Department in this field:

"Transfer to the Department of Labor the Division of Industrial Hygiene now in the Public Health Service."

This is Recommendation 2 of the Temple University Survey of Federal Reorganization just completed, and, though still unpublicized, purporting to be the recommendation of a citizens committee formed "to help translate the findings of the Hoover Commission into reality."

The Survey report, says in support of this recommendation: "A major function of the Division of Industrial Hygiene concerns the administration of grants-in-aid to the states for industrial hygiene work. Administration of this program by the Public Health Service tends to build up the state public health departments at the expense of their labor agencies. It thus invades the area of inspection and administration of labor standards at two levels, both state and Federal, inviting conflict and duplication at both levels."

The Temple University Survey, 1953

THE following is from the preface to the Temple University Report, signed by Robert L. Johnson, University President, November, 1953:

"The massive labors of the Hoover Commission, concluded in 1949, came at a time when they were needed most, both as a blueprint for immediate action and as a research standard to guide all reorganization efforts in the future. Substantial action was taken but many of the Commission's recommendations remained unenacted when at the end of the 82nd Congress, the nation turned its eyes toward the 1952 national elections. As the campaign proceeded it became increasingly clear that a 'bridge' of research, so to speak, would be needed between the retiring Administration and its successor. In mid-October, therefore, a group of public-spirited citizens gave support to the Temple University Survey in order to bring the Hoover Report up to date and prepare guidelines for continued reorganization in the new Administration.

"Soon after the election, President Eisenhower, advised of the Survey, wrote: 'This understanding is most timely and should be very helpful to the prospective members of the new Administration. I am appointing a committee composed of Nelson A. Rockefeller, Arthur S. Flemming and Milton Eisenhower to represent me and work with my Assistant, Governor Sherman Adams, and the Budget Director in connection with this study. In view of the fact that the appointment of the new Cabinet will soon be complete, I would like to make available to the Cabinet designees the experience and findings of the experts who are now conducting the review.'

"In less than four months, the Temple Survey's recommendations were completed and transmitted to the President's Special Committee. Publication has been withheld until now, however, to give the new Administration full opportunity to weigh these findings in its own councils before submitting its reorganization program to the Congress. Having served its first and most urgent purpose, the Temple Survey is now ready for release as a general reference document."

The Temple Survey Report lists 75 "advisers to the Survey," public-spirited citizens who gave "of their views and of their time," without compensation. Then follow the names of 49 "consultants to the Survey." These are called "experts in governmental affairs and staff aides." Some of them received no compensation for their work. T. Coleman Andrews, Harry Flood Byrd, Lucius D. Clay, Lewis W. Douglas, James A. Farley, Henry R. Luce, and George D. Stoddard are among the advisers. These men are often in the public eye—but not because of their special knowledge of industrial hygiene. So far as the other advisers, as well as the consultants, are concerned, none is identified with any knowledge of or proficiency in industrial hygiene.

Now as to the "finding of the Hoover Commission" which this "citizens committee assumed to "translate into reality" . . . .

The Hoover Commission Report, 1949

IN 1949 the Commission on Organization of the Executive Branch of the Government (the Hoover Commission) in the section of its report covering the Labor Department stated (Recommendation 8, Page 18): "The Commission recommends that a detailed study be made of industrial hygiene functions to work out a logical division of functions between labor and health agencies."

So far as could be discovered, this recommendation was made without consultation of anyone in the field of industrial hygiene or occupational health.

The Hoover Commission Report was issued on March 14, 1949. In the following month the Public Health Department prepared its own comments from which these excerpts are taken:

"Industrial hygiene concerns itself with all the factors affecting the health of workers and hence is administered as an integral phase of a public health program. As such, it falls within the province of national, state, district, county, and city departments of health, in which responsibility for investigating and preventing diseases of mankind has been traditionally vested in this country.

"The U.S. Public Health Service has been engaged in this type of activity for nearly a half

century. State and local departments of health have also been rendering industrial hygiene services for the past two decades, and for the past 13 years these services have been a component of public health programs in practically every state and in a few large urban areas.

"In the practice of industrial hygiene all community resources are utilized. In the pooling of these resources, it has been recognized that there are other agencies in Federal and state governments that are concerned with industrial problems. Realizing this fact, the U.S. Public Health Service has concluded agreements with the Bureau of Labor Standards of the U.S. Department of Labor and the Bureau of Mines of the U.S. Department of the Interior, which form a basis of joint action in the industrial hygiene field. The principle of these agreements is the recognition that each agency has certain functions to perform and that these functions are such that they supplement each other. . . .

"Basically, industrial hygiene is inseparable from the broad public health program. If it is divorced from general adult hygiene, it must necessarily fail, for public health experience shows that less than one-fifteenth of labor-time lost from illness is traceable to the job. Also, it is often impossible to determine whether a given illness is connected with the occupation. Thus it is essential closely to coordinate industrial hygiene with general health work for a well-rounded and efficient adult health program.

"It should be obvious, therefore, that any program for the control of accidents and occupational diseases alone, which necessarily must be the limited scope of any agency attempting industrial hygiene other than a health department, will definitely fall short of the desired objectives. Furthermore, the development of an industrial hygiene program in any other organization would result in a duplication of effort and funds. The transfer of various health functions from the health department would in time lead to the development of a separate health service for our nearly nine million agriculture workers; a separate health service for our nearly million mine workers; a separate health service for our nearly five million transportation workers; and so on. The obvious principle to consider is that health problems are distinct functions of health departments, irrespective of age, sex, or class of individuals involved.

"Having presented considerations basic to industrial hygiene as a fundamental activity of health departments and having shown that cooperative relationships already exist in the industrial hygiene field between the various Federal and local agencies concerned with this problem, we should like to comment on the Commission's report in more specific terms.

"The report states that 'the actual inspection and administration of industrial hygiene and labor standards generally is traditionally part of the state labor agencies' factory inspection and labor work generally.' Actually, this is not the case. The actual facts are that state labor agencies through their factory inspection organizations have by tradition been concerned with accident prevention work only, with the exception of the two states, New York and Massachusetts. . . .

"It is conceded that the Bureau of Labor Standards and the Wage and Hour Division in the Department of Labor have responsibilities for working with state labor agencies and others in the preparation and development of labor laws, safety codes, and other standards, such as hours, wages, and so on. Industrial hygiene work does not attempt to enter these fields, confining itself solely to the maintenance and improvement of the health of workers. It is therefore difficult to see an imbalance has been created between state labor and health agencies, as alleged in the Commission's report, by the present allocation of grant-in-aid funds of the U.S. Public Health Service to state health departments. The allotment of Federal funds by the Public Health Service to state health authorities was authorized in Title VI of the Social Security Act; this function was reaffirmed in the Public Health Service Act of 1944 (Public Law 410, 78th Congress). Federal-State cooperative programs are developed and approved under legal authority after consultation by the Public Health Service with the state and Territorial health officers and under regulations established by the Surgeon General. Industrial hygiene programs thus were developed not as competing services, but as proper functions of the several state health departments, in states where no such services existed and where services were urgently needed for the protection of industrial workers.

"At no time has the Public Health Service advocated the establishment of an industrial hygiene service in a health department when such a service already existed in some other state agency, as in a department of labor or an industrial commission. In New York and Massachusetts, for example, where industrial hygiene has been a function of the Departments of Labor of these two states, the Public Health Service has never urged the state health commissioners to set up competing industrial hygiene programs. Instead, it has made arrangements with the state health commissioners whereby funds allotted to the state health departments of New York and Massachusetts for general public health work have been used to finance in part the work of the industrial hygiene divisions of the state labor departments. In other words, the Public Health Service does not allot to state health departments earmarked funds for industrial hygiene but does allot funds to state health departments for general health work. State health commissioners, realizing that industrial hygiene is an important phase of public health, have utilized these general health funds to bolster their industrial hygiene activities. . . .

"The report of the Commission on Organization closed with the recommendation 'that a detailed study be made of industrial hygiene functions to work out a logical division of functions

between labor and health agencies.' As already alluded to in the preceding statement, several studies have been made such as the one recommended by the Commission. These were initiated by the Interdepartmental Committee, under the leadership of Miss Josephine Roche, and later by the Bureau of the Budget. As a result of the study made by the Interdepartmental Committee, the basic agreements mentioned earlier between the Public Health Service and the Bureau of Labor Standards and the Bureau of Mines were developed and put into effect. Several studies were also made in 1943, and conferences were held that year between the Public Health Service and the Bureau of Labor Standards on this problem. As a result of these studies, the Director of the Bureau of the Budget, in a communication to the Administrator of the Federal Security Agency on November 2, 1945, stated that, in considering any estimates of appropriations under existing or future legislation, he would predicate any decision made on funds requested by the Department of Labor on the assumption that such funds will only be used directly, or by grantees under approved plans and budgets for grants-in-aid, (1) for programs involving industrial safety and accident prevention, and (2) for preparation, promulgation and enforcement of regulations in health, the latter function to be exercised with the assistance of the proper health authorities to the extent that the services of such authorities are made available. The Director of the Bureau of the Budget further stated that, conversely, any sums which his office recommends for the Public Health Service of the Federal Security Agency will be predicated on the assumption that such funds will only be used directly, or by grantees under approved plans and budgets for grants-in-aid, (1) for programs involving industrial health and research, (2) for services and recommendations for employees' health programs, (3) for promotional and educational activities in industrial health, and (4) for necessary assistance to the proper authorities in preparation, promulgation, and enforcement of laws and regulations. The Director of the Bureau of the Budget gave similar advice on this subject to the Secretary of Labor.

"As already stated, the Public Health Service in its work with the states in the industrial hygiene field has closely adhered to this division of functions laid down by the Director of the Bureau of the Budget and has fostered and promoted similar relationships among the various state agencies responsible for industrial hygiene. Obviously, the division of responsibility between state officials or agencies is to be determined by state law. In states where no fixed regulations exist dividing responsibility, the above principles have been recommended in all instances by the Public Health Service. In view of these facts, we cannot see the need for further study of this administrative subject as recommended by the Commission. . . .

"No one in the Division of Industrial Hygiene had the opportunity of being interviewed by any member of the task force on this specific problem. If such an interview had been granted, we feel sure that the thinking of this task force would have been clarified before making any recommendations."

The Facts

IN ORDER of time, the situation appears as follows:

1949 (March): The Hoover Commission recommendation that "a detailed study be made of industrial hygiene functions to work out a logical division of functions between labor and health agencies."

1949 (April): The U.S. Public Health Service statement that detailed studies already had been made, to an extent that rendered further studies unnecessary; that a logical division of functions already had been worked out; that certain of the allegations of the report were not true; that no one in the Division of Industrial Hygiene of the USPHS had been consulted or interviewed by any member of the Hoover Commission "task force" in respect of the recommendation, or the allegations made in support of it; and that the facts were a matter of public record.

1952 (October): The "group of public-spirited citizens" giving "support to the Temple University Survey, in order to bring the Hoover Report up to date and prepare guidelines for continued reorganization in the new Administration."

1953 (circa February): The Temple Survey's recommendations "completed and transmitted to the President's Special Committee."

1953 (November): "Publication has been withheld until now. . . . Having served its first and most urgent purpose, tne Temple Survey is now ready for release."

Why?

IN THE light of the facts—which are still a matter of public record—the attempted justification given for the Temple Survey recommendation is completely fallacious. The USPHS Division of Industrial Hygiene (1) has no grants-in-aid fund for industrial hygiene; (2) does not administer any such grants-in-aid; (3) has never attempted to develop health departments at the expense of state labor agencies, and has no desire to do so; (4) possesses no inspectional or enforcement authority, and does not want any such authority at any level.

It is pertinent to ask several things. Why did the Temple "task force" in its so-called studies as to industrial hygiene in 1952 by-pass and ignore the Public Health Service? Why were the facts so completely misrepresented? Why the secrecy—the long withholding of publication? And going from "why" to "who"—Who is being pleased? Who is being appeased? Industrial and trade associations have representatives who are familiar with the indirections of self-serving groups and their methods. It is suggested that these associations start asking questions. It might be a good idea to begin with certain members of Congress.

Otto Geier, Pioneer

1874-1954

OTTO P. GEIER, M.D., 79, died February 28, 1954, at Christ Hospital, Cincinnati. Dr. Geier's place of leadership in the struggling and formative days of industrial medicine, and his powerful example as a practitioner of the things he advocated are well known in the field of his professional career.[1] What he was there, however, and it was much, was only part of him, for he was a man of many qualities, all of them great. Significant is the recognition accorded him editorially in his home town papers. Thus, the *Cincinnati Times Star:*

IN THE death of Dr. Otto P. Geier, the nation has lost a pioneer and a pillar in the field of industrial medicine. But Cincinnati's loss has been heavier and more intimate. For half a century, Dr. Geier was a leader in the advancement of medicine, civic welfare and the arts in Cincinnati, and his vigorous, spirited personality made him a very personable influence in the community. A lifelong Cincinnatian, Otto Geier began to practice medicine here at the turn of the century. He was an early leader in reforms at the City Hall which took public health appointments out of the hands of politicians. Before the First World War, he was a far-sighted and energetic City Welfare Director. He was also an indispensable force in the 'pure milk' campaign and initiator of Christmas Seals in the city. After the first great war he served on the League of Nations Medical Committee. He was a charter member of the Community Chest and he helped bring the Blue Cross hospitalization plan to Cincinnati.

"Dr. Geier's work as director of the employees service department at the Cincinnati Milling Machine Company was a national model for industrial medical service in America. But all these activities did not prevent Otto Geier and his wife from encouraging all forms of cultural enterprise in Cincinnati. He was a lover of books, music and the arts, a past-president of the MacDowell Society and the Literary Club.

"This man who did so much to preserve life in others was not himself afraid of death. He would not have wanted to linger on in enfeebled health. One great disappointment of his life was the defeat of the campaign for fluoridation of Cincinnati's water, which campaign he headed. But he left his mark in so many ways on the constructive life of this city that all Cincinnatians will regret the passing of a great citizen of ideas, courage and action, whose life-work will live long after him."

And the *Cincinnati Enquirer:*

FROM THE day he began the practice of medicine in 1900 until his death near 80, Dr. Otto P. Geier kept busy trying to make Cincinnati a better, safer, more healthful place in which to live. But he was not a humorless reformer. On the contrary, he was consistently jovial and relaxed. He did not denounce those who sought to block his reforms. He just kept on making the case for what he was sure was right. Dr. Geier led an important fight many years ago to take public health activities out of corrupt politics. As City Welfare Director, he set up a sound, efficient system for charities and corrections. Only the older generation will remember when pure milk was a hope and a goal, not an accepted fact, in Cincinnati and in Ohio. But there was such a time. And Otto Geier was in the forefront of that important battle.

"Dr. Geier also was one of the pioneers of industrial medicine in the United States. We take it for granted today that forward-looking corporations should look after the health of their employees. But it was a radical idea in 1914, and Dr. Geier found his adversaries in that conflict among his colleagues in the medical profession.

"It was characteristic of Dr. Geier that his zeal for public health progress never waned. Only last year he came out of retirement at the age of 79 to lead the campaign for fluoridation of drinking water in Cincinnati. It was the pure milk campaign of 40 years earlier all over again—a contest against ingrained habit, suspicion of whatever is new, and reluctance to utilize the findings of science. Otto Geier was never a radical, but a true conservative. The reforms for which he labored—earnestly but with good humor—were calculated to conserve health, to strengthen the social fabric, and to adapt the free enterprise system to changing conditions. Cincinnati owes much to Otto Geier. And those who had the good fortune to know him well will mourn his passing with a special poignancy, for quite aside from his civic role he was a man of great charm and one who cherished friendships."

1. "Otto Geier, Individualist," *Indust. Med.*, 11:4, 189 (April) 1942.

The Industrial Blood Bank

HARDY A. KEMP, M.D., Professor of Preventive Medicine
Chairman of the Department of Preventive Medicine
Baylor University College of Medicine

TODAY you or some member of your family may need a blood transfusion. Today some friend, most likely a co-worker, may call on you for help in his sudden need for blood. There is only one insurance against his emergency—an organized blood reserve pool that would provide instantaneously the type of blood you need when you need it.

Blood cannot be manufactured by any means at any cost. Thus all the money in the world could not buy one pint of blood for transfusion unless some human being would be willing to supply it. Moreover, most hospitalization insurance policies do not pay for blood; if they do, the service is highly expensive and may indeed not always be available. The problem of supply then is often a matter for serious concern and an organized blood reserve pool is the most efficient answer.

Blood reserve pools, which are really blood insurance plans, are made available by Blood Centers—often known as blood banks—to any organized group having a minimum of 50 members. Under such an arrangement, company employees, unions, churches, lodges, etc., are eligible. Such plans offer savings in money, savings in time, and protection when needed.

The programs are simple in operation. Ordinarily a certain number of pints of blood are deposited with a Blood Center. When a member of the plan or his family needs blood a withdrawal is made. Usually there is a nominal service charge; this is based upon the actual cost of collecting and preparing the blood. Two important advantages obtain: first, the cost is simply that of collecting and preparing the blood and this is covered by the nominal service fee; second, and much more important, the individual concerned is spared the inconvenience of replacing the blood personally, or of paying the deposit fee required of patients not belonging to an organized blood reserve pool. The real advantage is that blood is available when needed.

In actual practice a designated representative of the group issues an authorization for transfer of credit from the reserve pool to the hosptial or clinic in which the pool member or a member of his family is the patient. As a rule, the Blood Center (blood bank) then assumes the obligation of providing the amount and the type of blood needed for the patient. Some blood banks are reluctant to assume such a responsibility, chiefly because of their limited resources. Thus groups that seek to organize blood pools would do well to deal only with blood centers that are able to provide the type of blood needed without respect to the type of blood received from the pool reserve. Under this sort of agreement, blood of all sorts is on deposit and there is no need to wait until someone of the correct type can be found to give blood. Nor is there any need to wait while donors are solicited and typed. The saving of time here and the protection to the person in need can hardly be overemphasized.

Each blood bank has its own plan of operation and groups desiring to establish a pool of reserve blood will find it necessary to meet requirements specific to each instance. Should a group start planning a blood reserve it would be well for the planners to have in mind first of all that ethical blood banks do not solicit business; they await requests from interested groups. Next, the group should name an executive committee to manage the pool's affairs. This committee prepares the list of persons participating and the names and telephone numbers of persons authorized to give permission for transfers of blood from the reserve pool. Two or three members of this executive committee should be designated to issue these authorizations since a single committee man may not always be available when called. As a rule, authorization will be readily granted to pool members and their immediate families but more often than not an emergency arising outside of the group's membership may still be of such concern that an interpolation of the rules with resultant authorization will be of the greatest importance not only to the individual in need but to group function as well.

In continuing operation blood reserve plans assign a monthly quota to each participating group. Usually a minimum of two persons for each one hundred in the group (2%) must deposit blood in the blood bank each month.

Executive committees will be wise to prepare a roster which designates a certain day in a certain month for a certain member of the group to make a regular deposit. Otherwise there will be needless and sometimes fruitless solicitation of the group at large. "On-time" deposits are vital to every blood reserve plan. There is no workable substitute for that item in such agreements. Very often the executive committee will find it necessary to notify the donor of this obligation but this is of small moment where an entire plan may be at stake. Thus it is well to point out here that it is not difficult to organize a blood reserve pool. The difficulty arises in keeping it going, and that indeed requires an extraordinary amount of enthusiasm, imagination, and plain, old-time drive to keep pool members reminded that good intentions alone cannot be transfused.

Pool members should know too that blood is a perishable substance. It can be preserved and kept useful for only 21 days even under the best of conditions. Many of our larger, more active blood banks, however, are able to extend a year's credit on each pint of blood deposited. Mutual understanding on this point must be clear. Thus, as the group uses its reserve credits, it should be understood that the oldest deposits are cancelled, but depositing groups should be able to retain a maximum time limit on each pint of blood deposited. Moreover, it should be understood that any surplus credits should be disposed of by the group's executive committee. This may be done by allocating the surplus to some person needing blood who is not a group member or to a "needy persons" pool, or to the blood bank itself.

Lately wide publicity concerning blood donation and blood pools has fostered a feeling that "anyone

can play." Actually, under the strict rules of the game, more than a few interested persons often find themselves as interested spectators, not players. Generally speaking, however, any adult in good health between the ages of 18 and 65 may, with complete safety to all concerned, donate blood at intervals of not less than six weeks following previous donations and not more than five times in any 12-month period. More specifically, ethical blood banks will not consider persons acceptable as donors if:

1. They have or have had malaria or malta (undulant) fever.
2. They have or have had diabetes or tuberculosis.
3. They have a cold or sore throat.
4. They are acutely allergic to foods or pollens, hay fever sufferers for example.
5. Their nutritional state is poor as indicated by their weight or weight loss (arbitrarily, women of less than 110 pounds of weight, men of less than 125 pounds).
6. A female donor who is pregnant or has been pregnant in the past nine months, or certainly a prospective donor who has had Rh trouble, Rh babies, or transfusion reactions due to Rh. (These are technical points, but persons affected are usually well informed as to the meaning of "Rh.")
7. They have had major surgery in the past nine months or have had a serious head injury.
8. They have had a confining type of illness within the past month.
9. They have ever had jaundice (yellow skin) not due to gall-stones. (For example, this includes a large number of ex-service people who had epidemic hepatitis while on duty.)
10. The individual has a very high blood pressure.
11. The individual has heart disease of an incapacitating type.
12. The individual has active stomach ulcers.
13. The prospective donor is recovering from a bout of alcoholism.

Members of the Air Forces who participate in flight operations, and plane crews of commercial airlines should not fly within 48 hours after giving blood. Medical legal difficulties seldom, if ever, arise, but executive committees of blood reserve pools will be prudent if they request unmarried minors to have written permssion from their parents or legal guardians before donating to the reserve pool.

Donors should be cautioned not to eat meals within three hours before giving blood. They may, however, eat or drink tea or coffee without cream, toast or crackers without butter. Fruit, fruit juices, or soft carbonated drinks may be had as desired. Additionally, donors should have and should keep these three rules for the day assigned to give blood:

1. Be certain of sufficient sleep and rest.
2. Take only fruit juices, black coffee, and clear tea or soft carbonated drinks within three hours before the blood donation—no fatty foods such as whole milk, cream, mayonnaise, butter, eggs, meat, soup, oils, and cheese within three hours before giving blood.
3. No smoking for one hour after giving blood, and no alcohol for the rest of the day.

Finally, there are many more things to be said about blood banking and blood services. Blood banks and blood reserve pools although relatively new in health practices are coming to occupy an important place in the medical scheme of things. So far, this service is not provided by most medical insurance policies, hospitalization plans, and the like. Perhaps this is just as well since blood banking through the organization of reserve pools offers an additional opportunity for effective group effort where individual problems are concerned. As a form of insurance, blood banking exemplifies the insurance principle of group effort to share loss. As an individual protection, it can be made to be highly effective in times of need. Its humanitarianism lends itself to group spirit and to that sense of well-being within a group which is so essential to group effectiveness.

Plans of this sort do not of necessity become a part of the medical plan for in-service or in-plant medical practice. Actually, the plan will be more effective if its organization and its operation is left to those whose first duty is not that of medical service. In that way it becomes group effort, not just an added Medical Department activity. Actually, where the Medical Department has been given the responsibility or has had to undertake the program as an added responsibility too often there has been a lack of understanding on the part of all concerned, and a lack of sympathy on the part of the employed group what they consider to be only something else for the Medical Department to use as a group irritant. Instead of adding this to the duties of the Medical Department, whatever the size and scope of that department might be, it would be well to recognize, where management is concerned, that a plan for blood banking is no more the direct concern of the Medical Department than is any other insurance program provided for the group. Moreover, experience has shown that urging from the Medical Department may be ever so eloquent and yet fall far short of group effectiveness where the group itself takes the matter in its own hands and assumes the responsibility for its operation. Advice of the Medical Department should be sought, indeed, but it should be used for executive guidance, not executive action.

Lastly, you might well be reminded once more that today you may need blood. A group plan is your best kind of blood insurance. And where can you get terms as good as 2%.

THE industrial physician works under a light, and it is like no other light in the world" • "There is a whole lot of symptomatology that doctors in general practice don't know about because they don't see it. The symptoms they have before them when they are finally called in, comprise usually the second or third set. Doctors know, of course, that there are pre-tuberculosis symptoms, but how many have ever seen pre-pre-tuberculosis symptoms?" • "It is good management to employ a good industrial physician; but it is exceedingly bad management to require a first-rate physician to report to a second-rate executive" • "The industrial physician can exhibit, without embarrassment to himself or his company, more interest in a wider field of human activity than any other physician, or any layman."—Quoting OTTO GEIER, *Indust. Med.*, 11:4, 172 (April) 1942.

President's Page

THE inevitable passage of time brings the term of office of the undersigned rapidly to a close. In that this current effort marks the last President's Page to appear under the present administration, it seems desirable to review briefly some of the developments and accomplishments within the Association during the preceding 12 months, especially for the information of those members who will be unable to attend the 1954 annual meeting.

1953 saw the inauguration of an Association "News Letter." It was the belief of the Directors that this was a needed vehicle to convey information to members regarding the business and other internal affairs of the Association; information that might be too specific and detailed to be of general interest to all regular subscribers to the Journal. During the past 12 months, two such letters have appeared and a third is in preparation.

The American Foundation of Occupational Health, a trust created by the Association, is in the process of administrative reorganization, ultimately to be known as the Occupational Health Institute. Efforts to effect this change were begun only after long and careful consideration by the Trustees, and only with the encouragement of the Directors of the Industrial Medical Association and the Advisory Board to the Foundation. It is hoped that this reorganization will place the Foundation on a much firmer footing, financially and otherwise.

In recent years many professional organizations have shown increasing interest in Health and Accident Insurance programs on a group basis. The advantages of such an arrangement of course consist of lower premium costs and waiver of the individual subscriber's physical condition at the time of purchase, the latter depending upon the percent of member participation. In April, 1953, acting upon the recommendation of the Association's Insurance Committee, the Directors approved sponsorship of such a plan. To date there has been approximately a 20% enrollment with additional subscriptions continually being received. It also is important to record that during the first 10 months of operation of this program, 30 claims have been received and processed by the group administration office.

Employment of a professional public relations counsellor on a year-round basis was another forward step taken during 1953. Although the Association now is well known in medical and allied professional circles, the same does not hold true with regard to management, labor, and the general public. It is believed that the use of this type of expert service will go far toward increasing the stature of the Association throughout the country at large.

Membership in the Association has continued to increase during the year. Unfortunately a portion of this increment has been offset by members lost during the same period, through death, resignation, or delinquency in dues. However the trend is steadily upward.

During the year, significant progress has been made toward establishment of an approved specialty board in Occupational Medicine. The President's Page of the February, 1954, issue of the *Journal* was devoted to a review of this subject.

As in the past, the District Counselors and Committees have continued to labor faithfully throughout the year in the Association's behalf. No new standing committees were created this year but all that were in existence as of April, 1953, were re-appointed. In accordance with recommendations of the Counselors themselves, the number of Counselor districts was increased from 29 to 32 by reorganization of three existing districts into six smaller geographical units.

One of the highlights of the past year was the 21st Anniversary Issue of *Industrial Medicine and Surgery* which appeared in October. The result of much time, thought, and meticulous attention to detail on the part of the Editors and the Publisher, this issue served greatly to advance the cause of medicine in industry and to reflect credit upon the Industrial Medical Association as well as upon other organizations whose activities are devoted to the field of Occupational Health.

Dr. Arthur K. Peterson, who during the past several years has served the Association so ably as its Secretary, has requested relief from further tenure in this post because of the increasing pressure of his other activities. It was with a deep sense of loss that the Officers and Directors of the Association honored his request and it is certain that his wisdom and counsel will be missed at future executive meetings.

After a year at the helm, the undersigned has come fully to appreciate the fact that the policies and operations of the Association can neither be conceived nor successfully carried out by one man or even by a small group. To perform efficiently, the cooperative interest and efforts of all the Officers, Directors, Counselors, Committeemen, and Component Societies are necessary. It has been my good fortune to receive such loyal and enthusiastic cooperation during this term of office, and for this I close on a note of sincere appreciation to all who played a part in the affairs of the Association during the past 12 months.

George F. Wilkins M.D.

Industrial Health Conference

Conference Chairmen, April 24-30, 1954

H. R. Atherton, M.D.
Chairman
Arrangements Committee

Hazel Beck, R.N.
Chairman
Joint Publicity Committee

E. S. Jones, M.D.
Chairman
Entertainment Committee

P. J. Whitaker, M.D.
Chairman
Scientific Exhibits

Donald C. Conzett, M.D.
President
Central States Society

Will F. Lyon, M.D.
President
Chicago Society

Eugene L. Walsh, M.D.
Chairman
Hospital Clinics

A. H. Whittaker, M.D.
Chairman
Section on Surgery

Conference Features

SO FAR as the program and general arrangements for the 1954 Industrial Health Conference, April 27-30, at Hotel Sherman, Chicago, are concerned, it is ready to begin. The six participating organizations are: INDUSTRIAL MEDICAL ASSOCIATION (39th Annual Meeting); AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS (16th Annual Meeting); AMERICAN INDUSTRIAL HYGIENE ASSOCIATION (15th Annual Meeting); AMERICAN ASSOCIATION OF INDUSTRIAL NURSES (12th Annual Meeting); AMERICAN ASSOCIATION OF INDUSTRIAL DENTISTS (11th Annual Meeting); UNITED STATES NAVY INDUSTRIAL HEALTH ORGANIZATION (6th Annual Meeting). All the Associations have separate programs, with joint meetings of two or more of the groups occurring at intervals. There are to be 115 formal presentations, five panel discussions, numerous luncheon conferences, three banquets, and many committee meetings. A continuing feature throughout the whole seven days will be the "Technical Guidance Clinic," described previously in this Journal. Among the subjects of special interest, to be dealt with in a succession of several presentations, are the following: industrial hygiene instrumentation, health education, air pollution, radiation hazards, disaster control, lung cancer, new toxicities and the place of tobacco in the etiology of lung cancer. The DONALD E. CUMMINGS MEMORIAL LECTURE will be given by FRANK A. PATTY, Industrial Hygiene Department, General Motors Corporation, Detroit, at the AIHA Banquet, Thursday evening, April 29. The Annual Banquet of the INDUSTRIAL MEDICAL ASSOCIATION will be held at 7:00 P.M., Wednesday, April 28, and the AAIN banquet at 7:30 P.M., Thursday, April 29. More than a hundred Technical Exhibits will acquaint the alert industrial physician with all the latest developments in products and equipment that will aid him in his work. Among the technical exhibits are the following:

Abbott Laboratories—"Exhibiting Covicone Cream, a new protective skin cream against contact dermatosis and allied conditions"....Booth 96.

American Cancer Society—"Exhibiting a display interpreting the services American Cancer Society offers to Business and Industry"....Booth SA.

American Hospital Supply Corporation—"Exhibiting Coreco Camera, Hemolet, Dade Serums, and other clinical laboratory equipment"....Booth 89.

American Optical Company—"Industrial Safety and Visual Efficiency"....Booth 27.

American Sterilizer Company—"Exhibiting sterilizers, tables, lights for the medical profession"....Booth 36.

American Tobacco Company—"Exhibiting a new recording automatic cigarette weighing balance"....Booths 63 and 64.

Armour and Company—"Exhibiting the Dial line of antiseptic soaps"....Booth 44.

Arnar-Stone Labs, Inc.—"New developments in regard to the Americaine line of topical anesthetic products"....Booth 103.

A. S. Aloe Company—"Physicians' Hospital and Laboratory Equipment and Supplies"....Booths 101 and 102.

Audivox, Inc.—"Exhibiting finely designed and engineered hearing aids and audiometers"....Booth 12.

Ayerst, McKenna & Harrison—"Explaining and demonstrating the protective qualities of 'Kerodex' creams against hazards known as causes of occupational dermatitis"....Booth 4.

Batrow Laboratories, Inc.—"Exhibiting new models of Neuromuscular Stimulators"....Booth 49.

Bauer and Black—"Exhibiting Curad Plastic Bandages, Kerlix Gauze, and other dressings for industrial needs"....Booth 37.

Becker Surgical Supply—"Exhibiting industrial dressings, instruments and equipment for industrial medical installations"....Booth 1.

Becton, Dickinson & Co.—"Exhibiting syringes, needles, vacutainer, blood culture bottles, elastic bandages"....Booths 61 and 62.

Bristol-Myers Company—"Bufferin; Sal Hepatica; Ammens Medicated powder; Trushay; and Minit Rub"....Booths 98 and 99.

Camel Cigarettes—"Marking your initials on an attractive plastic cigarette case filled with a package of Camels"....Booths 13 and 14.

Carbisulphoil Company—"Exhibiting Foille, Activol, and Tarcaine"....Booth 85.

Chattanooga Pharmacal Company—"Exhibiting Hydrocollator Steam Packs and Master Units"....Booth 107.

Chicago Pharmacal Company—"Featuring the following specialties: Urised; Tolyspaz, and Tolyphy"....Booth 100.

Ciba Pharmaceutical Products, Inc.—"Exhibiting two new agents for effective management of hypertensive disorders: Regitive and Apresolive"....Booth 10.

Coca-Cola Company—"Ice-cold Coca-Cola served through the cooperation and courtesy of the Coca-Cola Bottling Company of Chicago, Inc., and the Coca-Cola Company"....Booth 17.

Connecticut Bandage Mills, Inc.—"Featuring the Conco line of medical products"....Booth 82.

Davis Emergency Equipment Company, Inc.—"Exhibiting Industrial Safety Equipment Products and Toxic Gas Analyzers"....Booth 45.

DoHo Chemical Corporation—"Featuring Auralgan, New Otosmosan, Rhinalgan, Rectalgan"....Booth 59.

Dome Chemicals, Inc.—"Featuring the Domeboro Products"....Booth 18.

Duke Laboratories, Inc.—"Elastoplast-bandages, Unit Dressings and Coverlets; Tecto; Nivea Creme-Skin Oil, and Basis Soap"....Booth 26.

Eaton Laboratories, Inc.—"Products of Special Interest to Industrial Physicians"....Booth 94.

Encyclopaedia Britannica, Inc.—"Featuring Encyclopaedia Britannica Publications"....Booth 31.

Florida Brace Corporation—"Featuring the Jewett Hyperextension Brace"....Booth 15.

Hamilton Manufacturing Company—"Featuring Hamilton Steeltone Examining Room Equipment"....Booths 46 and 47.

Herman Hosmer Scott, Inc.—"Exhibiting the latest in Noise-Measuring Instruments"....Booth 52.

Hygiene Research, Inc.—"Exhibiting industrial protective hand creams and a mistproofing cloth for goggles"....Booth 23.

Ille Electric Corporation—"Physical Therapy Equipment"....Booth 106.

International Cellucotton Products Company—"Educational material on menstrual health and the common cold"....Booth 79.

Johnson and Johnson—"Surgical Dressings"....Booth 32.

Joseph K. Dennis Company—"Group Insurance Program"....Booth 93.

Karel First Aid Supply Company—"Industrial Hospital Equipment and Supplies"....Booth 25.

The Keeley Institute—"Staff physicians will be on hand to discuss recent progress in the care and treatment of alcoholism and drug addiction"....Booth 2.

Keystone View Company—"Featuring overhead teaching projector and vision screening equipment"....Booth 86.

Liberty Mutual Insurance Company—"Featuring Liberty Mutual Rehabilitation Program"....Booth 38.

Liebel-Flarsheim Company—"Diathermy and Bovie Electrosurgical apparatus"....Booth 95.

Lightfoot Schultz Company—"Featuring Lightfoot Powdered Skin Cleansers, conditioners, and soap dispensers"....Booth 7.

Eli Lilly and Company—"Pharmaceuticals and Biologicals"....Booth 108.

Lincoln Laboratories, Inc.—"Featuring 'Hexathricin,' an economical pressure packaged burn treatment"....Booth 66.

P. Lorillard Company—"Featuring Old Gold, Embassy and Kent cigarettes"....Booth 56.

Maico Company, Inc.—"Hearing testing equipment"....Booth 53.

Medco Products Company—"Featuring the Medcolator Electrical Muscle Stimulator"....Booth 30.

Medical Coaches, Inc.—"Featuring Mobile Medical Clinics of flexible design for use in specific or multiphasic screening programs"....Booth 97.

Metropolitan Life Insurance Company—"Display of occupational health and safety services available to industry by Metropolitan Life Insurance Company"....Booth 43.

Milburn Company—"Skin Protective creams, chemical, and heat-resisting clothing"....Booth 28.

Mine Safety Appliances Company—"Instruments; Artificial Respiration Equipment; First aid Materials"....Booths 109 and 110.

National Cylinder Gas Company—"Featuring Inhalation Therapy Apparatus"....Booths 20 and 21.

Nepera Chemical Company, Inc.—"Featuring Biomydrin Nasal Solution"....Booth 72.

New York Medical Exchange—"Patricia Edgerly will be on hand to discuss problems relating to personnel for your Medical Department"....Booth 55.

Onox, Inc.—"Onox Footmats"....Booth 41.

G. H. Packwood Manufacturing Company—"Featuring PAX safety industrial skin cleansers and dispensers"....Booth 51.

Parke, Davis and Company—"Pharmaceutical specialties and surgical dressings"....Booth 42.

Paschall Laboratories, Inc.—"Exhibiting Episcorb Inhalant, Nebulizer and Ointment; Lotshaw Body Rub and Pellent, Delfra Pro Kots"....Booth 48.

Pepsi-Cola Company—"Serving ice-cold Pepsi Cola"....Booths 80 and 81.

Ries Corporation—"Moistaire; Heat Therapy Equipment"....Booth 105.

Ritter Company, Inc.—"Exhibiting examination and treatment tables, surgery tables, ENT equipment"....Booths 34 and 35.

J. B. Roerig and Company—"Featuring-Tetracyn —the newest broad spectrum antibiotic"....Booth 111.

Sacro-Matic, Inc.—"Featuring the Sacro-Matic table"....Booth 19.

Sanborn Company—"Electrocardiographic and Metabolism Equipment"....Booth 9.

Schenley Laboratories, Inc.—"Featuring Titralac, Sedamyl, Emphased, Dorbane, and Crephex"....Booth 5.

Schering Corporation—"Featuring new therapeutic developments"....Booth 58.

Scholl Manufacturing Company—"Surgical Adhesives and Dressings"....Booth 65.

Sharp and Dohme—"Featuring 'Hydrocortone' or 'Cortone' and 'Benemid' "....Booth 8.

Shay Medical Bureau—"Medical Placement Bureau"....Booth 40.

Smith, Kline and French Laboratories—"Featuring 'Daprisal,' a new non-narcotic analgesic"....Booth 6.

Sonotone Corporation—"Audiometers"....Booth 24.

Stepan Chemical Company—"Featuring ph6 Skin Cleanser"....Booth 54.

Stephenson Corporation—"Respiration and Scientific Equipment"....Booth 16.

Tampax, Incorporated—"Featuring educational material on menstrual health"....Booth 3.

Teckla Garment Company—"Featuring Teckla Krinkle Kimonas"....Booth 88.

United States Safety Service Company—"The very latest development in salt tablets"....Booth 11.

University of Michigan—"Educational Exhibit, depicting activities of the Institute of Industrial Health"....Booth 50.

Vestal, Inc.—"Top-Quality Antiseptic Products" ....Booth 39.

Westwood Pharmaceutical—"Featuring 'Pro-Derna' and Lowila Cake"....Booth 57.

Whitehall Pharmacal Company—"Anacin; Bi-So-Dol; Sperti Ointment"....Booth 104.

Willson Products, Inc.—"Respirators and Scientific Equipment"....Booth 60.

Winthrop-Stearns, Inc.—"Ethical Pharmaceuticals"....Booth 87.

Woodward Medical Personnel Bureau—"Medical Placement Bureau"....Booth 29.

Orientation in Industrial Medicine

UNDER the auspices of the Special Committee on Industrial Medicine of the Medical Society of the County of New York, the following program was presented at the New York Academy of Medicine in March and April. This course was designed primarily for the general physician and originated largely from the efforts of DR. ARTHUR E. HOAG, Medical Director, Whelan Drug Company, Inc., Retired Medical Director, Socony Vacuum Oil Company. The program was as follows:

March 4: (a) Introductory Remarks—PETER M. MURRAY, M.D., President-Elect, Medical Society of the County of New York.

(b) "The Objectives of an Industrial Medical Department"—ARTHUR E. HOAG, M.D., Medical Director, Whelan Drug Company, Inc., Retired Medical Director, Socony Vacuum Oil Company.

(c) "Relationship of the Industrial Physician to Family Physician and Consulting Specialist"—LEO J. WADE, M.D., Medical Director, Esso Standard Oil Company; CURTIS H. BAYLOR, M.D., Assistant Medical Director, The Texas Company.

March 11: (a) "Preplacement Examinations"; (b) "Periodic Health Examinations"; (c) "Post-Illness and Rehabilitation Problems"—MAX N. HOWARD, M.D., Industrial Physician, Socony Vacuum Oil Company.

(d) "The problems of the Older Worker"—ARTHUR E. HOAG, M.D.

March 18: (a) "Occupational Injuries and Diseases (Compensation)"—WILLIS M. WEEDEN, M.D., Medical Director, New York State Workmen's Compensation Board.

(b) "Non-Occupational Sickness (Sick Benefit)"—J. E. LICHTNER, M.D., Assistant Medical Director, New York State Workmen's Compensation Board.

March 25: (a) "Industrial Toxicology and Environmental Safety Consulting Service"—LEONARD GREENBURG, M.D., Commissioner, Department of Air Pollution Control; IRVING R. TABERSHAW, M.D., Director, New York State Department of Labor—Division of Industrial Hygiene & Safety Standards.

March 31: (a) "History and Records in the Industrial Medical Department"—WILLIAM L. WHEELER, JR., M.D., Medical Director, W. R. Grace & Company; Grace Line.

(b) "The Nurse in the Industrial Medical Department"—MISS R. WHITFIELD, R.N., Superintendent of Nursing Service, The Texas Company.

(c) "Physical Set-up in an Industrial Medical Department"—ARTHUR E. HOAG, M.D.

April 7: (a) "The Social and Economic Values of an Industrial Medical Department"—KENNETH PEACOCK, M.D., Associate Professor of Surgery, New York Medical College; Medical Director, Owens-Illinois Glass Company.

(b) Round Table Discussion: *Management*—MR. W. H. MONTGOMERY, Manager, Industrial Relations Department, Socony Vacuum Oil Company; *Union*—(to be announced); *Physician*—I. SAUL KLEMES, M.D., Medical Director, Ideal Mutual Insurance Company; J. C. Penney Company.

Foreseen and Prevented

BY GIVING the Medical Department its proper place in the company organization, and endowing its managers with enough authority, management will be standing on the right doorstep to take advantage of the new concept in industrial medicine—that of using the program to keep unhealthiness away, to be more constructive in meeting employee's total health needs. After all, 90% of absenteeism is owing to off-the-job causes. Of this percent, three-quarters is a result of illnesses which a Medical Department might have foreseen and prevented.

—From "Is Management Getting the Utmost from Its Medical Departments?" by MARGARET L. JONES, in *Dun's Review & Modern Industry*, February, 1954.

Books

Industrial Health in Steel

STUDY OF INDUSTRIAL HEALTH PRACTICES FOR THE IRON AND STEEL INDUSTRY: American Iron and Steel Institute, 350 Fifth Avenue, New York 1, 1953, p. 239.

As industrial medicine becomes larger and larger, it is a natural expectancy that more and more segregation will arise and that this will be commendable. While certain fundamentals, particularly as to objectives, are common to the entire practice of industrial medicine, it is untenable to believe that a single program of medical services is suitable for all. No claim may be made that the program for a department store and for mining operations should be the same. One indication of the setting apart of programs best suited to special groups is this study of industrial health practices for the iron and steel industry. The "Foreword" well describes the purpose of this book in this language:

"This volume was prepared by the Committee on Industrial Health of the American Iron and Steel Institute. Its purpose is to make available to members of the iron and steel industry the results of a study of industrial health practices and to afford an over-all appraisal of the progress this industry has made over the years in this important field.

"This volume is not intended to set or even suggest standards of policy and practice in the field of industrial health for all or any of the iron and steel companies. Throughout the industry physical facilities and practices vary according to the needs encountered in individual plants. Where satisfactory and adequate community hospital facilities exist, company medical and hospital programs will no doubt display a high grade of integration with these community programs rather than depend primarily on separate, individual in-plant facilities."

This publication is no record of achievement and no presentation of statistics. It reflects policies, practices, procedures, and facilities. It is particularly helpful in its presentation of floor plans for various size medical establishments. Proper emphasis is directed to industrial hygiene and to health education. In fact, no essential item requisite to an outstanding program is omitted, although rehabilitation almost escapes attention except by implication. While constituting a superb bill of medical desirabilities for the steel industry, almost in its totality it is applicable to many other divisions of heavy industry. The entire publications merits praise, and just a little envy is justified.

Toxicity

TOXICITY OF INDUSTRIAL ORGANIC SOLVENTS: ETHEL BROWNING. Her Majesty's Stationery Office, 1953, pp. 411, £1. 15 d. Od. net.

Glory be! A new edition. This book long has been the mistress of every good industrial hygienist in the United States. The old edition (1937) was getting a little worn out, and now newness and freshness, still wearing the bright red dress, but in the format mode of 1935. Always the injunction is to read originals—let the abstracts go. The difficulty is that all too often originals appear in obscure foreign journals inaccessible to the usual United States industrial hygienists and physicians, and even so, few in the present generation can manage any language other than English. Dr. Browning's genius runs at least in two directions. She is able to concentrate the essence of a long publication into a half-page of her own book. A greater genius springs from an uncanny capacity for locating information as to toxic properties of obscure chemicals just about to emerge for wide industrial use. Anybody may find ample information for guidance as to carbon tetrachloride, but who among us, save Ethel Browning, might have included "amylene dichloride" in any compilation. That sort of thing makes this book valuable. It is too bad that such genius has no wider spread as to book publication than the solvents. By design this book is so limited. Unless you have a copy of this book—maybe you aren't an industrial hygienist after all!

Emphysema

CHRONIC PULMONARY EMPHYSEMA: MAURICE S. SEGAL, M.D.; M. J. DULFANO, M.D. Grune & Stratton, New York, 1953, pp. 180.

Increasingly, pulmonary emphysema is looming large in the realm of pulmonary diseases. Until recently emphysema has been relegated to a minor part in the pathology of lung affections. Casually it has been regarded merely as a complication, an ancillary affair, a concomitant. Now it has ascended to a dominant position—not always an entity, but always a contributor to disability and often times the source of the patient's complaints. Especially is this true in silicosis, thus distinctly reaching into industrial medicine, although that is not the sole entryway.

In the early days of medicine, therapy was king. Pathology was nothing beyond a few basic conceptions shared by many diseases. With the rise of cellular pathology and bacteriology, scientific concern in treatment, while never abandoned, became a secondary consideration. Diagnosis ruled the medical record. Nowadays the swing is back toward therapy. Emphysema long was a therapeutic victim. There was no effective treatment. This book while omitting no fullness as to the physiologic insult and pathologic alterations of emphysema, helpfully emphasizes treatment and the procedures therefor. That alone makes the book valuable and commands approbation.

What Is Eating You?

PEPTIC ULCER: LUCIAN A. SMITH and ANDREW B. RIVERS. Appleton-Century-Crafts, Inc., New York, 1953, pp. 576.

One distinguishment of a good book or scientific periodical article is the terse but revealing title. Library cataloguers and journal indexers have their lives cut short by such titles as "Some Observations on the Instances of Gastric Ulceration with and without Perforation and Treatment therefor." That might have been the title of this book, but nothing of the sort. Instead "Peptic Ulcer." The entire book is like that—terse but revealing. That title forecasts the contents of the book but not its quality. As to that, in language hopefully nearly as succinct as that of the authors, it may be said that never before have the covers of a relatively small monograph contained so much exactness but at the same time fullness of peptic ulcers. Perhaps without their awareness the authors have emphasized that there is little newness about any aspect of peptic ulcers—just better understanding of the old.

Some may insist that surely emotional factors in the causation of ulcers represent newness. To the contrary, many ancient items disclose that that supposed newness is about 2000 years old. A quotation substantiates that assertion:

"Definite mention of gastric ulcer is made by Diocles of Carystos in the fourth century B.C. This

eminent physician described the symptoms of ulcer not too accurately, but he made the pertinent observation of their relationship to mental diseases. This same observer pointed out the aggravation of gastric disturbances in those who participated in the wars of the time."

Near to newness is the often repeated contention that, as to therapy, the patient himself must become a part of his own medical therapy. Without his cooperation and adjustment drugs and regimes become of little avail. A peptic ulcer is no fleeting affair like a mild case of impetigo—quickly come and quickly gone. In a measure a patient must come to learn to live with his ulcer or at least the threat of its return. A good patient as well as a good physician becomes requisite.

In part the peptic ulcer is the product of stress. Almost it has come about that "ulcer" is a synonym of "executive." Ulcers take up residence in the stomach of harried executives who supposedly loll in the lush appointments of industry's front offices. Executives, contrary to some popular belief, toil—toil more than the operatives out in the plant—and acquire more than their share of ulcers.

And now, excuse, please. The reviewer is off to feed his own ulcer.

Patterns

CONTACT DERMATITIS: GEORGE WALDBOTT. Charles C. Thomas, Publisher, Springfield, Illinois, 1953, pp. 218, $8.75.

This book was not written solely for industrial physicians but for all physicians. Much of it is so close to occupational dermatitis that a lot of eagerness among industrial physicians to espouse it has appeared. Industrial medicine would like to be identified with this book and a kinship is here claimed. In the early pages, Dr. Waldbott notes that practically any material which the skin touches directly is likely to induce a contact dermatitis. That statement surrounds all of human activity with a sort of dermal threat which one would like to deny, but Dr. Waldbott sets about the business of proving the truth of his generalization. By the time of the book's end almost anyone is likely to be convinced.

While any chapter of this book well might be selected for emphasis in review, the notable contributions by Dr. Waldbott are his patterns of skin involvement, and particularly the hand patterns. These patterns lead to endless photography and diagrams. Human beings are surrounded by thousands of objects to be handled most of which are obvious and include such commonplace things as combs, tooth paste, potato peelers, screw drivers, and endless such. Not every person holds his fork in the same manner or his fountain pen or his electric razor, but after all there is a limit to the ways that a fountain pen may be held or a medicine dropper. Thus for every commonplace object there are patterns rather than "pattern" indicating the nature of the contact with the human body. In imagination, everything that touches the human body is coated with a readily transferable dye. If any object touches the skin, the dye registers its own peculiar pattern. But, there is some overlapping. The pattern from the grasping of a flashlight or a tennis racket may be much the same. Thus for the author contact dermatitis in part becomes a game, but by this time the author knows nearly all the answers. Thus when a dermatitis appears just on one finger—not the ball of the finger, but the whole phalanx—what might this be? One answer, at least, the thimble wearer. But in another patient, and still a woman, that entire phalanx might not be involved but just a band all the way around it. Not a thimble wearer but the curling of hair around that finger. Hair curling is apt to involve the forefinger but the thimble wearer usually makes use of the middle finger. And thus the story unfolds, finger by finger, hand area by hand area, arm, leg, feet, torso, face. No area escapes, and nothing appears to be harmless. Of such is this book, and its worth is not to be denied.

Unfamiliar

JOINT ILO/WHO COMMITTEE ON OCCUPATIONAL HEALTH, SECOND REPORT. World Health Organization Technical Report Series No. 66, Columbia University Press, New York, N.Y., 1953, pp. 30, $0.20.

It is noteworthy that the United States, a country with a mild reputation of being industrialized, is represented by no resident on the WHO section of this Committee. At the outset of the Committee's work, it was agreed that no discussions would be entered upon that invaded the special interests of either party, i.e., ILO and WHO. Apparently that didn't leave much, or at least the record of what was left is fairly watery. Such platitudes as these appear:

"For tuberculosis and other long-term illnesses which may incapacitate a worker, many countries provide disability insurance which protects his family's income. The plant medical service can cooperate by providing proper medical information on disabilities covered by such insurance.

"After recovery and rehabilitation, appropriate resettlement is important. The precise placement of a worker, with regular medical follow-up, should be carefully made to avoid undue strains which might cause a new breakdown in his health.

"Tuberculosis control is particularly important in industries with young workers, especially young women, among whom the incidence of the disease is high."

How little this Committee appears to be in touch with the status of good industrial medicine in the United States is reflected in this quotation:

"A most important field of cooperation is the joint application of health measures to large groups of workers in a plant. For example, if a factory has an industrial medical service, it would be possible for the public-health agency to conduct a rapid screening programme, the findings of which might be turned over to the plant medical department for continued medical effort for correction."

Likely nothing would be more disturbing to the Medical Director in the United States conducting his own well devised occupational health program. As one ponders this report, it becomes possible to wonder.

The Great Need

WORKMEN'S COMPENSATION PROBLEMS 1952: Proceedings 33rd Annual Convention of the International Association of Industrial Accident Boards and Commissions. U.S. Dept. of Labor, Bulletin No. 167, Washington, D.C.: pp. 226: Single copies free of charge; quantity purchases 65 cents each.

This bulletin includes many excellent papers by prominent workmen's compensation officials and outstanding medical men covering such subjects as medical evidence in industrial injury cases with special reference to neuropsychiatric claims, cooperation between labor and employer groups in improving workmen's compensation law and its administration, and cooperation between the legal,

professional and workmen's compensation agencies.

One session of the convention was devoted to the over-all problem of rehabilitation of injured workers; and two panel discussions on Administration of Occupational Disease Provisions and Disability Rating Methods for Eye Injuries are important features of the proceedings. The bulletin also carries the President's address, the regular committee reports, and the resolutions as adopted.

There are some indications that the International Association of Industrial Accident Boards and Commissions has been engulfed by the Federal Department of Labor. This publication appears as a product of the U.S. Dept. of Labor; the director of the Bureau of Labor Standards being the secretary-treasurer of the International Association, and the staff of the Bureau of Labor Standards constituting the editorial group for these proceedings. In the majority, if not all, of the state jurisdictions, the Commission embraces representation of the employer and the public. In these proceedings the voice of labor is strident, but the voice of spokesmen for the public and the employer appears to be at about the 40 decibel level of subdued conversation. Ever the demand is for larger and larger benefits and wider and wider coverage. At every turn is insistence that the benefits under the compensation system are not in step with present-day costs of living and current wages. While not advocated, from time to time allusions appear, and possibly only as threats, to the abandonment of the compensation system and reversion to the old liability procedures and damage suits. In keeping with labor practices in general, some demand appears for support of added fringe benefits compounding the cost of compensation. For example, in one jurisdiction, there is now in effect the provision that in the instance wherein a workman has employed an attorney and successfully obtains an award, the cost of the plaintiff's attorney becomes an additional expense imposed upon the employer. Running through these proceedings many pronouncements are praiseworthy, but outstanding is "The object of all help is to make all help superfluous."

Not yet do numerous industrial compensation commissions realize, or at least emphasize, that mere monies do not solve the problem of the injured worker. Rehabilitation and readjustment are the great need.

The keynote of these proceedings is the demand for boldness and drastic changes in workmen compensation laws. If boldness be the immediate objective, then these proceedings may be labeled as "bold."

Letters

Naples, in September

TO THE EDITOR: The XI International Congress on Industrial Medicine takes place September 13 to 19 at Naples, Italy. Professor Scipione Caccuri, President and Director of Industrial Medicine, Policlinico, is Chairman of the Organizing Committee. All industrial physicians, hygienists, nurses, and teachers of industrial health are invited to register and to attend the Congress. There will be receptions, excursions, banquets, and other interesting events. The official languages are to be English, French, Italian, and German. Arrangements have been made that each person in attendance be supplied with a phone with dial so that a paper being read in Italian can be dialed into English translation or into whatever of the other languages is required.

Attendance at this International Congress offers the great privilege and pleasure of association with famous industrial physicians from every important country of the World, and the exchange of information on industrial medical progress, to say nothing of the development of understanding and friendship between peoples. Add to this the great joy of visiting beautiful Italy again with its treasures of civilization and of art.

The International Congress on Industrial Medicine which meets every three years is sponsored by the Permanent Committee on Industrial Medicine. This Committee consists of 173 members representing 34 countries of both hemispheres. Its headquarters are at Geneva where the Secretary General resides. The United States has 12 members on the Permanent Committee. The function of the International Committee is to sponsor the triennial Congress, to vote on where the Congress is to be held, to elect officers and committees, and to direct the publications program, together with other important procedures.

Why not a trip to Italy this year? Rates will be cheaper as the dates are off season. Excellent new steamers are sailing from New York to Naples. Only a week after this Congress adjourns, the World Medical Association meets at Rome, affording an opportunity to visit two important medical meetings in two ancient cities.

—ROBERT T. LEGGE, M.D.,
Chairman of the Permanent Committee.

For the Smaller Industries

TO THE EDITOR: The Bureau of Industrial Health of the Cincinnati Health Department was organized in July, 1952, to make available to the small industries and businesses of the community another source of guidance and advice on matters of industrial health. In September, 1953, access to adequate industrial hygiene laboratory facilities was provided through an arrangement between the City Board of Health and the University of Cincinnati. The Bureau may now draw upon the technical personnel and the facilities of the Kettering Laboratory as needed for making quantitative observations on environmental conditions in local plants.

Some recent activities of the Bureau of Industrial Health may be of interest.

1. *Manufacturer of automobile accessories*—An employee complained of illness and attributed the symptoms to inhalation of solvent vapor from a trichlorethylene degreasing tank. Inspection suggested that degreasing was being carried out properly and that the tank was well designed for safe operation. Analysis of samples of air collected at the tank, and also at the work station of the employee, indicated that contamination of air in the plant was insignificant. Suggestions for minor changes in exhaust ventilation of the tank were made. It was learned that a mild out-break of food poisoning had occurred at the time the complaint was received. The symptoms of the subject employee were more characteristic of food poisoning than of solvent absorption. The employees felt reassured that they were not being exposed to hazardous conditions in the plant. The management welcomed the presentation of the facts in the case.

2. *Manufacturer of radiation detection instruments*—An "explosion" of radioactive material had contaminated the building. Later, a fire in the basement of the building had resulted in focal re-contamination. Following additional cleaning up, it was

planned that the basement be used for manufacturing purposes. Determination of residual radioactivity indicated that persons could work regularly in the area with safety.

3. *Fabricator of plastic awnings*—An employee complained of respiratory irritation which his physician was said to have attributed to his work of cutting sheets of plastic on an abrasive wheel. An inspection of the local exhaust ventilation of the cutting operation indicated that the existing system was ineffective in removing irritating dust and vapor. Analysis of an air sample disclosed some contamination of the work room by styrene. Recommendations were made for improving the exhaust system, for better plant housekeeping, and for providing the cutting wheel operator with adequate eye protection.

4. *Manufacturer of roofing materials*—An employee complained of recurrent nausea and headache when working near a laboratory hood in which solvent extraction of asphalt paper was being carried out. The solvent, carbon tetrachloride, was being boiled inside the hood which was opened from time to time. Measurement of air velocity across the face of the hood determined that the system of exhaust ventilation was wholly inadequate for safe operation under certain weather conditions. Analysis of samples of air collected in the work room showed significant contamination by vapors of the highly dangerous solvent being used. Recommendations for re-design of hood ventilation were made.

5. *Brass foundry*—An employee was hospitalized for the treatment of lead poisoning. Assistance in determining the proper time for return to work was requested by his physician. On visiting the plant it was learned that the management was not aware that exposure to lead is a health problem in brass foundries. A complete appraisal of lead exposures in the plant was carried out. Recommendations for protection of employees were based upon this study.

6. *Instrument manufacturer*—A department manager requested information on the health hazards associated with the handling of beryllium compounds. It was learned that several employees had recently suffered from skin disorders which were suggestive of the results of beryllium exposure. Recommendations were made for safe handling of materials containing this element, and arrangements were completed for consultation should further cases develop. It was observed in another part of the shop that mercury was being handled in open containers without protective measures of any kind. It was recommended that some observations be made on contamination of the air of the workroom by mercury. It was suggested that, in view of the widespread handling of such highly dangerous materials in the plant, the provision of in-plant health and safety services be considered.

7. *Manufacturer of musical instruments*—The plant physician requested assistance in laying out and furnishing equipment for a plant dispensary. Plans were reviewed with the physician, the plant nurse, and the plant engineer. Suggestions were made for certain changes and additions.

8. *The Purchasing Department of the City of Cincinnati*—Requested a review of specifications for the procurement of insecticides for the use in city installations such as the General Hospital, the Waste Disposal Plant and the Workhouse. Specifications were standardized so that the exposure of handlers can be kept under close control.

As a progress report on in-plant health programs initiated during the year: (a) *Manufacturer of power garden equipment*—This small plant of 150 employees has just been given recognition of achievement by the Industrial Medical Association following a personal audit of the health facilities by a Director of the Association. The company is the recipient of the Certificate of Approval of the American Foundation of Occupational Health. Less than 200 of the nation's leading industrial and business establishments have as yet received the Certificate. The Cincinnati plant is one of the smallest that has qualified for it. The Bureau of Industrial Health has demonstrated the fact that a high standard of health protection can be provided for employees of small organizations at reasonable cost, by tailoring health services to the specific needs of the industry and the plant. Assistance in developing a safety program has now been requested by the plant management. (b) *Manufacturer of industrial ventilating equipment*—Voluntary periodic health examinations of employees are progressing satisfactorily. The plant nurse and physician, working with the advice and assistance of the Bureau, have developed a system of medical and safety records that is leading the management to an awareness of losses resulting from occupational injuries. There is increasing recognition of the value of sound health guidance. (c) *Shoe manufacturer*—The Bureau is working closely with the plant physician in improving the meager facilities available, and in training several supervisory employees in the elements of first aid including transportation of the sick and injured. We have received one emergency call from this plant in the case of an employee who collapsed on the job while engaged in the handling of a highly volatile solvent. (d) *Automobile agency*—The management and the employees state that they are looking forward to continuing on an annual basis the voluntary periodic health examinations initiated last spring.

—James P. Hughes, M.D.,
Bureau of Industrial Health, Cincinnati Health Department, % Kettering Laboratory, Cincinnati 19, Ohio.

Science Miniature

Facial Dermatitis Among Quail Force Feeders

One variety of European quail migrates to warmer African climates for the winter months. These quail, not well adapted for long flight, scarcely are able to traverse the Mediterranean and many are drowned. Others, helplessly fatigued, drop near the shores of Northern Africa and easily are netted and picked up by the natives. After some recovery they are shipped to French cities. There a seasonal trade arises involving the forced feeding of these quails preparatory to marketing as a gourmand's delicacy. For some reason little known, some constituent of human saliva is judged to be necessary in this stuffing process. The intended food first is masticated by these humans and then is squirted from lips to beak into the gullets of the captive birds. In retaliation these birds, held in the hand and with beaks close to the lips, peck their tenders, thereby transmitting by small traumata the organism of an avian fungal disease. The consequence is a facial dermatitis chiefly limited to the labial region, and thus in this instance an occupational affection.

—Haven Emerson, M.D., New York.

INDUSTRIAL MEDICINE AND SURGERY

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DR. PERTTI SUMARI, Finland
DR. A. R. THOMPSON, England
DR. A. UYTDENHOEF, Belgium

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Academic Degrees in Occupational Health

THE usual physician is little concerned in earned college degrees other than his "M.D." That one degree he cherishes, since that alone distinguishes him from other legalized practitioners of medicine, such as the practitioners of osteopathy. In some other countries, fellowship in any learned society is the equivalent of a degree. In academic circles the Ph.D. is the canopy degree awarded for almost any high level postgraduate attainment. It is possible that a Ph.D. in medicine has been awarded. It is certain that much of medicine's research and some teaching and even some clinical endeavors are conducted by holders of the Ph.D. degree and no complaint is directed to that circumstance. In some schools of Public Health the faculty may include more Ph.D.'s than either M.D.'s or holders of the degree of Dr.P.H. Master of Public Health (M.P.H.) is the degree most often encountered in schools of Public Health and the Public Health departments of cities and states. Withal, the mere appellation "Dr." no longer is a distinguishing designation. As specialty training in occupational health becomes frequent but by no means the rule, uncertainty arises as to the desirability of a degree that identifies that specialty. With some exceptions specialty training in occupational health whether for physicians or industrial hygienists centers about Public Health schools. It becomes pertinent to inquire if the usual degrees awarded by such schools meet the need. The usual practice is to extend to graduating candidates the Master of Public Health degree or, less frequently, the Dr.P.H. with possible addition in either instance "in industrial health." Dr. C. O. Sappington was the recipient of the first Doctor of Public Health degree in industrial medicine. It may be observed that the holder of an M.P.H. who is attached to a Public Health department, but serving in the division of industrial health, better is equipped to transfer to other divisions, should the occasion arise, than would be true were the degree indicative solely of qualifications in industrial health.

Still, the trend and the demand are for a specific degree. Harvard now provides a Master of Industrial Health degree, while Cincinnati after three years of specialty training bestows the degree of Doctor of Industrial Medicine. It may not be believed that number alone determines the appeal of particularized degrees, but the two schools mentioned have higher enrollments than other schools making available only the traditional degrees.

At this moment no pattern has asserted itself as undebatably proper. Time alone will serve as the instrument making evident the suitability of this or that academic degree for those who elect specialty training in occupational health.

The Widows

THE WORLD never tires of reading about widows, their numbers, their habits and their habitats. Presently, according to the Metropolitan Life Insurance Company, there are just about 7,500,000 widows in the United States and every year a hundred-thousand join that sisterhood. By 1960 the number will exceed 8,000,000. All this implies that male-kind is seldom the survivor. Precisely it is true that female spouses outlive their counterparts. But it is easy to overlook the fact that if males and females enjoyed an equal length of life still there would be many hundreds of thousands of widows solely due to the fact that at marriage the bride usually is the junior of the bridegroom. Indeed there are widowers,

too, but there is much less concern in the numbers of widowers. Only the marriage bureaus get excited. These widowers are relatively unimportant and are accorded a near nothingness in legislation. Who ever heard of any plan for pensions for widowers?

Of all widows, 50% are 65 years or older but even so that age does not entirely remove them from the marts of marriage. Only 10% are younger than 45. Characteristically the widow has become an urbanite, 73% preferring the conveniences of city life. Not always does it necessarily follow that such life is one of delight since somewhere near half, but more particularly those in the younger brackets, have relatives including their own children living with them.

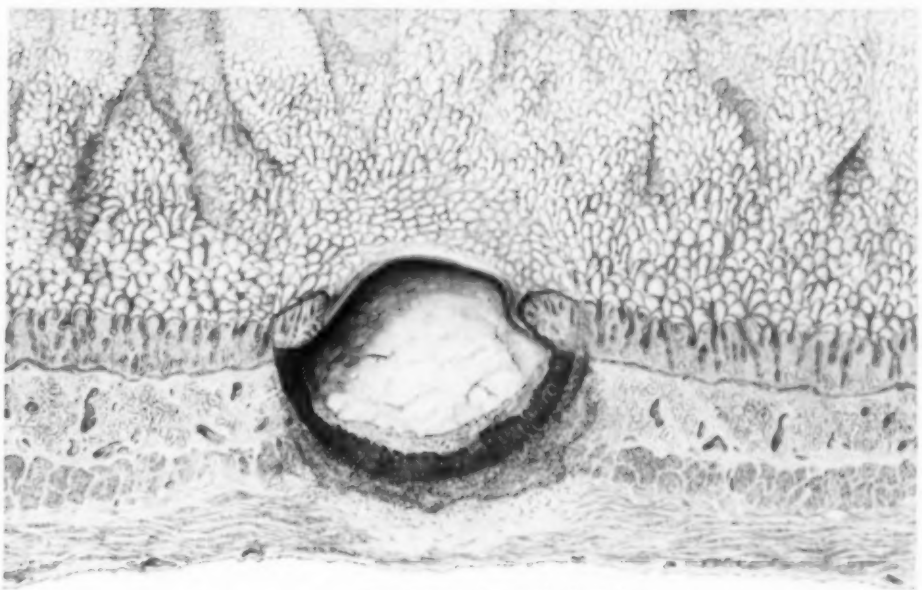
During the war period a commonplace pleasantry was that "maybe after all the war would be won if the grandmothers just hold out." So as to the present and lately, and abandoning all facetiousness, truly it may be said that when it comes to manpower in industry these widows constitute a never-failing reservoir, and their industrial usefulness by no means is limited to the young. Grandmothers and widows have a place in industry.

Naive, or Sinister?

INNOCENTLY enough, public-spirited citizens sometimes find themselves out on a limb. We refer to those 75 "advisers" to the Temple University Survey who "gave of their views and their time" to the report that contains the recommendation described on page 177, concerning the USPHS "Industrial Hygiene Division" (now the Division of Occupational Health). Regarding the allegations in support of that recommendation, these estimable and doubtless well-meaning people are made to appear as giving their approval to statements that are not true, and to conclusions from those statements that merely compound the falsities. We wonder how many of them know they are being so used. The industrial hygiene recommendation in question here is only a small part of the Temple Survey. But the circumstances out of which it emerged are such as to cast suspicion on the whole project. "Task force" seems a fitting designation for the several who prepared the report; they were assigned their task: "Go get 'em, and make it look good!" Attempts such as this are more than distressing; they have sinister overtones. Perhaps, however, this one's naive eagerness to please somebody high up in labor has gone a bit far to be taken too seriously. The apple has a real polish, indeed, when it can be urged with a straight face that the USPHS Division of Occupational Health be transferred to the Department of Labor for any such trivial and meaningless reason as "to *round out* the present authority of the Department in that field." Maybe some of the big names among the "advisers" will find it good public relations—even good politics—to have the Temple University "task force" and the Department of Labor *square up* with the facts. Aboveboard and objective study of the facts by *qualified* investigators will not produce any real reason why the Division of Industrial Hygiene should be transferred from the USPHS to the Department of Labor or anywhere else but, on the contrary, will produce many real reasons why it should remain where it is and be strengthened and encouraged there. If any good reason for such a transfer existed, it would have been discovered long ago. None has. Occupational hygiene is an integral part of the over-all USPHS public health program; it would be distinctly out of place anywhere else. It is not known that the Labor Department is administering any over-all program of public health; occupational hygiene in that Department would be an isolated unrelated enterprise. The over-reaching speciousness of the allegations in the Temple Survey, the secrecy surrounding them, and the obvious bias of their intentions, should arouse the representatives of industry to articulate and forceful and immediate opposition.

Bring a Little

A GOOD many who will read these words are planning to attend the Industrial Health Conference at the Hotel Sherman, in Chicago, April 24-30. The officers and committee chairmen and members of the six organizations participating in that Conference are putting a tremendous amount of time, effort, and ability into the happy business of a whole week of superlative presentations and interesting events. There is no idle moment; the program is practically a seven-day session, often on a double-phase and sometimes on a triple-phase basis. There are things new and interesting to see; things useful and important to hear; things pertinent and permanent to be learned; old friends with whom to commune; new friends to be made. Everyone who attends will find innumerable opportunities to take away with him much of value. To the extent that he does so profit through his attendance, just so will the planners of the program feel repaid. Not from them, but only from our own sense of the fitness of things, we suggest that those most surely will find something to take away when they go who will bring a little with them when they come. That little may be no more than the resolve to *visit every exhibit*. This is not much to invest in the occasion—not a tithe of the amount the exhibitor will have invested—but it will be sufficient to insure dividends of appreciation and good-will too big to measure.



Cross section of active duodenal ulcer.

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"In studying[1] the mechanism of ulcer pain, it is obvious that there are at least two factors which must be considered: namely, hydrochloric acid and motility.

"... our studies indicate that ulcer pain in the uncomplicated case is invariably associated with abnormal motility. ...

"Prompt relief of ulcer pain by ganglionic blocking agents ... coincided exactly with cessation of abnormal motility and relaxation of the stomach."

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One of the typical cases cited by the authors[2] is that of a male patient who refused surgery despite the presence of a huge crater in the duodenal bulb.

"This ulcer crater was unusually large, yet on 30 mg. doses of Pro-Banthine [q.i.d.] his symptoms were relieved in 48 hours and a most dramatic diminution in the size of the crater was evident within 12 days."

Pro-Banthine is proving equally effective in the relief of hypermotility of the large and small bowel, certain forms of pylorospasm, pancreatitis and ureteral and bladder spasm. G. D. Searle & Co., Research in the Service of Medicine.

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1. Ruffin, J. M.; Baylin, G. J.; Legerton, C. W., Jr., and Texter, E. C., Jr.: Mechanism of Pain in Peptic Ulcer, Gastroenterology *23*:252 (Feb.) 1953.
2. Schwartz, I. R.; Lehman, E.; Ostrove, R., and Seibel, J. M.: A Clinical Evaluation of a New Anticholinergic Drug, Pro-Banthine, Gastroenterology *25*:416 (Nov.) 1953.

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TO MAINTAIN health requires the ingenuity of many, the application of the accepted knowledge of the few, and the appreciation of its worth to employer and employee alike."

—ROBERT COLLIER PAGE, M.D.

Hard to Believe

A SURVEY made recently pointed up the beneficial effect of the coffee break on employee morale and efficiency. It disclosed how 1,160 companies regard coffee breaks as a production tool: 82% noted reduction of worker fatigue; 75% noted improved morale; 62% noted increased worker productivity; 32% noted reduced accident rate; 21% noted reduced employee turnovers; 16% noted reduced scrap; 15% noted reduced waste; 12% noted reduced absenteeism.

—*Management Methods*, March, 1954.

Trust Fund Rackets

THE House Labor Committee has ordered an investigation of racketeering in the administration of labor union welfare funds. President Eisenhower recommended such an investigation in his special labor message to Congress, saying that it was necessary to "protect and conserve" union trust funds set aside for such things as pensions and medical care.

—*AMA Washington Letter*, February 19, 1954.

How to Remember

PSYCHOLOGISTS have found that 68 consecutive repetitions of a certain material will not be remembered as well as 28 repetitions of the material spread over three consecutive days. Will you best remember things which you learn early in the morning? This popular belief has been exploded by psychologists, who found that the best way to learn a thing was to study it just before going to bed, and then get eight hours of sleep.

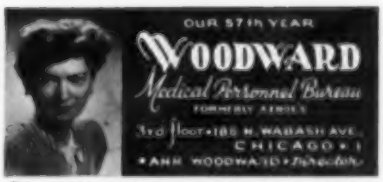
—*Management Digest*, December, 1953, in *Office Executive*, March, 1954.

On Fluorides

INSTITUTE of Industrial Health of the University of Cincinnati announces a Symposium on Fluorides, May 10, 11, and 12, 1954, by the Kettering Laboratory in the Department of Preventive Medicine and Industrial Health. The objectives are to bring together and present the accumulated information on this subject to workers in the field. For these purposes, the program has been divided into three daily sessions of talks and discussions which deal with inorganic and organic fluorides, their biological effects on plants, animals and man, and the associated problems of atmospheric control. Consideration will also be given to legal and economic aspects. The course will be open to physicians in industry and public health and to other professional persons concerned with the problems of fluorides. Those interested may obtain further information from the Secretary, Institute of Industrial Health, Kettering Laboratory, Eden and Bethesda Avenues, Cincinnati 19, Ohio.

The Hartford Plan

A FEW words about the Hartford Plan. In 1946, eight industrial plants in the greater Hartford area, convinced of the need for medical care, agreed to pool their resources to hire a full-time, experienced industrial physician. This physician spends a certain amount of time in each plant, performing pre-employment physical examinations, giving medical care for occupational diseases and injury, emergency care for non-occupational diseases, and administering a preventive medical program. Each of the eight plants has one or two full-time industrial nurses who are under the direction of the physician. Emergencies beyond the scope of the nurse in the plant are taken care of immediately by the plant physician who can be reached at all times through a prearranged schedule. This system gives each plant the benefits of a full-time nurse and also makes a well trained physician available. This plan is now in its sixth year of operation. It has worked out to the satisfaction of labor and management and has paid for itself in savings. We are now actively engaged in promoting similar programs of improving small plant medical care in other areas in our state. While the Hartford Plan and many of our medical departments can be regarded as model indus-



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Medical Director: (223) Internist, Diplomate, American Board Internal Medicine; FACP; Currently heading industrial medical program $5,000 employees; recommended without reservation; strong leader; early 40's.

Medical Director: (224) Following eight years successful private practice and two years as Medical Director, important company has been, for six years, Medical Director in complete charge of program involving 55,000 employees and 27 plants; outstanding man both administratively and clinically.

Medical Director: (225) Degrees from leading schools; eminently qualified toxicology; eight years, Director, important industrial hygiene program; three years, Director, cancer industrial research program; early 40's; one of leaders in the industrial medical field; strongly recommended.

Staff Physician: (226) Class "A" graduate; six years, successful private general and surgical practice; three years, staff physician, large state college; prefers industrial medicine; very well-qualified man for an assistant to busy industrial Medical Director; middle 40's.

Staff Physician: (227) Class "A" graduate; five years, Major, USAMC; two years, Staff Physician, large plant, heavy metal industry; reliable, cooperative, able to take direction; seeks post leading to medical directorship; age, 31.

POSITIONS OPEN

Medical Director: (93) Certified Internist; important medical facility major company; requires highest calibre man with administrative and organizational ability; $15,000, Chicago.

Medical Director: (94) Overseas construction project; semi-tropical; one to two year contract; around $15,000.

Physician: (95) To develop and direct health service of progressive company; 3500 employees; $12-$15,000; New England.

Medical Director: (96) One of leading companies; opportunity of assuming medical directorship four additional plants; N.E.

Associate Medical Director: (97) new post; regional office, one of country's foremost firms; Chicago.

Medical Director: (98) One with chem degree; to supervise industrial hygiene program; major corporation; town, $5,000; Midl.

Associate Medical Director: (99) Important plant, machine mfr.; excel. facilities; $10-12,000; large medical and art center; MW.

Staff Physician: (100) One exper. in industrial medicine or public health and able direct medical program eventually; lead'g corp.; to $12,000; attrac. town; E.

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trial medical care facilities, we also find in our state a gradient of quality in industrial medical services which varies from the minimum to excellent medical services. We have concentrated on the plants with the least medical service. Our nursing consultants and physicians are engaged in a continuous program of salesmanship and education to convince management of the value of good industrial medical care and how it may be provided. Plants are encouraged to employ nurses and physicians. Consultation is given to industry in the securing of medical personnel, the purchase of equipment or designing of a medical room or department.

—From "Occupational Health Program in a State Health Department," by STANLEY H. OSBORN, M.D., and J. HOWARD JOHNSTON, M.D., in *Am. J. Public Health.*

The Total Health Problem

A FORUM on the place of industry, labor, and medicine in the total health of Philadelphia's industrial population was held at Woman's Medical College of Pennsylvania, March 11, 1954. The following are from a summary of the discussions: (1) RONALD F. BUCHAN, M.D., Director, Employee Health, Prudential Insurance Company, Newark, New Jersey: "There is a problem in bringing to a small industry a comprehensive program for health service. One solution is for a group of small plants to band together to set up a central clinic and other facilities. Or several plants may employ, jointly, a physician on a full-time basis. The real cost of either of these methods is without doubt less than that of receiving fractional services of an occasional, casual, or on-call physician. From a medical point of view it is one of the great fallacies of industries, large and small, that they unknowingly spend on ill-advised fractional services much in excess of the investment necessary to establish a comprehensive health service." (2) FRANCIS J. BRACELAND, M.D., SC.D., Psychiatrist-in-Chief, Institute of Living, Hartford, Connecticut; Clinical Professor of Psychiatry, Yale University: "It has been estimated that approximately 70% of dismissals in industry are due to some form of social incompetence and only 30% to technical incompetence. Emotional illness and maladjustments are reported to be second only to the common cold as a source of absenteeism." (3) DAVID E. WILLIAMS, Chairman of the Board, Girard Trust Corn Exchange Bank, Philadelphia: "Forward looking business men are coming to recognize the close tie-up between industrial and community health. A company can have the best in-plant medical service and still be troubled with absenteeism if the town drinking water is polluted." (4) EDWARD L. BORTZ, M.D., Past President, American Medical Association, and Chief of Medical Services, Lankenau Hospital: "When we can demonstrate the total benefits of total health to industry, to labor, and to the community, we shall

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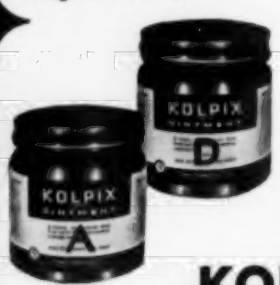

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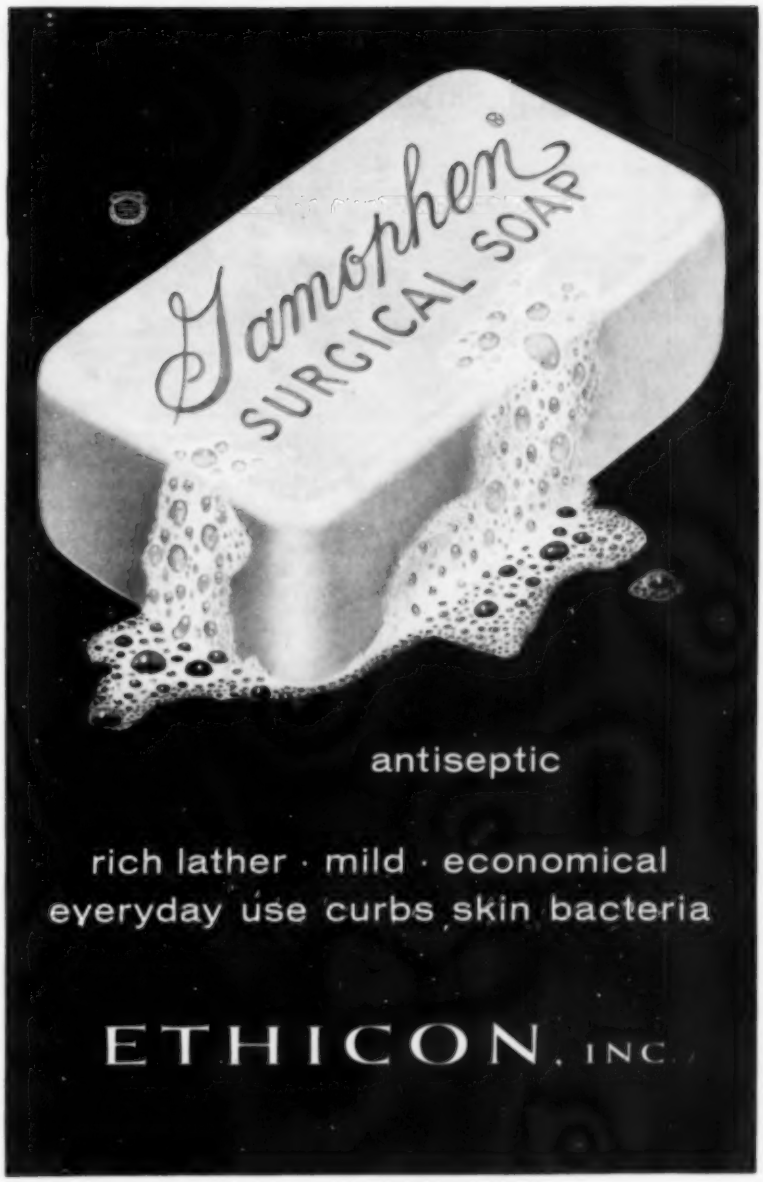
have a cause that will sweep everything — even lethargy and procrastination—before it."

Cigarettes and Cancer

THE tobacco industry has appealed to the Federal Department of Agriculture to look into any possible link between cigarette smoking and cancer of the lung. The industry's attitude is highly commendable, although it does not follow that the Agriculture Department or any branch of government is especially equipped to undertake this task. The appeal follows the formation, earlier this year, of an industry-wide research committee of tobacco growers and cigarette makers. The very organization of such a committee is in pleasing contrast with the earlier attitude of a few tobacco men who had tried to dismiss the fears of some cancer researchers with a simple "It ain't so." The industry is quite right in pointing out that nothing conclusive has been produced to show that cigarette smoking causes or hastens cancer in human beings. Medical science does not know what causes any type of cancer or even whether any factor outside the body may cause it. Much of the evidence against the cigarette is statistical and circumstantial. Smoking has increased greatly in recent decades and so has cancer of the lung, especially in men, who are heavier smokers than women. Irritating by-products of combustion have also been under suspicion as contributors to cancer. But as researchers into the effect of cigarette smoke have pointed out, our age is producing a lot of by-products of combustion in the very air we breathe. There is evidence that lung cancer occurs more frequently in city areas with polluted air. The Department of Agriculture might be justified in underwriting part of the expense and in helping to correlate research connected with the good name of a principal crop. The actual job, of course, must be done by competent researchers, whether they are working for government or for private institutions. Any research into the causes of cancer should be encouraged. Every time we prove that something does not cause cancer, we are nearer the riddle of what does cause it. The cigarette industry is quite naturally defending its product, but its sponsorship of research is an enlightened and admirable selfishness.

—Editorial, *Chicago Daily News*, March 16, 1954.



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the hazards relative to pyrophyllite?—mercury vapor?—metallizing? We need respirator protection against arsine. How can we guard against chromium poisoning? What is the physiologic action of barium titanate? What about the colorimetric determination of carbon monoxide in blood? How are aging problems going to affect us? What can we do about human engineering in the design and setup of our machinery? *Little* problems? Certainly not. These are the questions that save lives and time and money. These are the requests that lead to major improvements, to safe working environments, to an awareness of what needs to be done. No problem is ever too small to merit our full attention.

—*From Foundation Facts,* Industrial Hygiene Foundation Newsletter, February, 1954.

Britain's Poor Medical Service

DESPITE the huge deficit under which the British Health Service is operating, the most serious penalty under the system is the quality of service physicians can render, Dr. Samuel A. Garlan said at a meeting in New York City. Dr. Garlan was asked to give a talk on compulsory Federal health insurance and used his firsthand knowledge of the service in Great Britain to warn of such a program. "Medicine as practiced in Great Britain is in a decadent state," he said, and "the only hope and salvation of the

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general practitioners in Great Britain centers in the newly organized Royal College of General Practitioners." As seen in Great Britain today, doctors' offices will be forever crowded; individual patients will receive only scant attention; long waiting lists for hospitals will be inevitable. The average physician is forced to see about 60 patients daily in his office or the home and receives a fee of £1, equivalent to $3 in our currency. Dr. Garlan stated that since the maximum of patients a panel physician is allowed to carry is 3,000, his highest gross income will be $9,000 a year—and that is before extremely high taxes and maintenance expenses are deducted. If he attempts to care for the top number of patients, it is impossible for him to render anything that resembles top quality medicine as is known in the United States today. The English general practitioner is completely divorced from the hospital—he has no hospital status. He can perform no tests or minor operations in his office on British Health Service patients. When patients require the above, the general practitioner loses all contact until the patient is well and released by the hospital. Dr. Garlan also pointed out that in those countries where government health insurance is in force the demand for medical attention increases considerably. It is impossible to prevent abuses. In reference to the degree that socialized medicine is being attempted in this country, Dr. Garlan singled out the H.I.P., the Kaiser-Permanente Plan, and the Rip Van Winkle Clinic of Hudson, New York, as examples of un-American health insurance plans. He said the free medical care which persons with non-service-connected disabilities have been receiving in veterans administration's attempt to subsidize medical schools actually amounts to Federal participation in medicine. He denounced any treaty arrangements which take priority over all existing statutes in the United States. —*GP*, March, 1954.

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Discretionary Retirement

THE growing opposition to retirement of workers on a chronological age basis is being reflected more in the findings of medical authorities on the subject. Industrial physicians are studying the subject more than ever before, with a view toward prolonging the working careers of employees. Blanket extension of the age limit beyond the normal retirement at 65 years is not recommended by the doctors. Rather, as the American Medical Association recently pointed out editorially in its *Journal*, "the best solution is the creation of a panel to include one or more high-level executives and the industrial physician to judge each case on its merits and determine whether the worker should continue in his present status, go on a modified schedule, transfer to a less demanding job or be retired."

—*New York Times, February* 27, 1954.

Nursing Services in Industry

THE California Medical Association and the California State Nurses Association have reviewed the contribution to industrial

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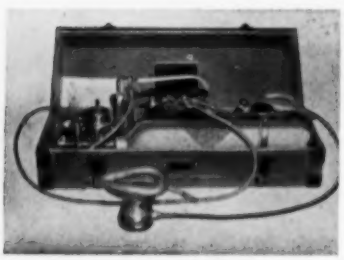

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health made by the members of the nursing profession through the individual activities of the nurses employed by and in industry. Through their contact with individual employees and with members of management, nurses have furthered public health education, the use of community resources, improved personal and plant hygiene, healthier psychological relationships between management and workers, and a closer liaison between the plant employee and the practicing physician. It is also recognized, however, that demands are made by both employees and management upon nurses in industry to engage in activities which appear to encroach upon the practice of medicine as defined by the California Medical Practice Act. If the nurse accedes to these demands, she is jeopardizing her professional status and her very livelihood. It is urged that the nurse in industry, having met a particular emergency with which she is confronted, protect herself, her patient and her employer by referring the patient to a physician for diagnosis or medical care when either is required, and that further treatment be carried on only under such medical supervision. Employers of nurses are urged to facilitate and encourage such referrals, in order that they themselves may be protected against being involved in violations of the Medical Practice Act. Technicalities of the Medical Practice Act are difficult to translate into lay language and no simple definition can be given as to what services may be rendered with impunity. It certainly may be said, however, that any injury serious enough to cause even temporary disability or which requires more than protective dressing, or which does not respond favorably to procedures which are commonly considered to be emergency nursing procedures requires medical treatment. It must be borne in mind that, regardless of the wishes of the patient or his personal needs, or the demands of the employer in regard to industrial injuries, a nurse is forbidden by law either to diagnose or treat medical conditions or surgical injuries. Only as this fact is fully understood by employees and employers alike will the pressure upon the nurse to exceed her functions be lessened. It is essential that every nurse and her industrial employer be thoroughly conversant with

Immediately after the patient's arrival an admitting physician takes a complete medical history.

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the Medical Practice Act and its implications. It must be remembered that the law cannot be ignored. A violation remains a violation whether committed ignorantly or knowingly. The California Medical Association and the California State Nurses Association anticipate and welcome the further extension of employment of nurses in industry in view of their contributions both to the over-all health and to the physical and emotional welfare of employed individuals. Both organizations look forward to establishing and maintaining the area in which the professional industrial nurse may function effectively, efficiently, ethically, and legally.

—A Statement of Principles made jointly by the California Medical Association and the California State Nurses Association, in *California Medicine*, September, 1953.

Accident Costs

IT IS estimated that each industrial accident costs five times the medical bills incurred by the victim. Calculating such factors as lost time of personnel in the department, production delays, investigation time, paperwork and replacement training, a recent study showed that a typical instance of a workman injured at a drill press involved $235 in medical costs and $1,202 in additional expenses.

—*Management Methods*, December, 1953; in *Office Executive*, March, 1954.

Clerical Costs

INEFFICIENCY in the clerical operation is often a hidden cost factor. It can express itself as low output, errors, increased supervisory or executive time, disturbed customer relations, etc. One company found the average cost of a mis-file to be $61.23. The low-output typist is often paid the same salary for half the production as the high-output girl. Clerical errors look minor, but the hidden costs are high. Studies show, for example, that it costs three or more times as much to discover and rectify a clerical error as it does to pay for correct work in the beginning.

—International Psychology, Inc., in *Office Executive*, March, 1954.

State Survey

THE newly-appointed Industrial Health Committee has sent out questionnaires to all members of Washington State Medical Association requesting information on the practice of industrial medicine in the state. Early completion and return of the forms is requested in order that the Committee may be guided in its recommendations to the Board of Trustees, T. G. HANKS, Boeing Medical Director, and Secretary of the Committee, said. The completed questionnaires will show what proportion of Washington physicians practice industrial medicine and to what extent, how many are directly connected with an industry and what types of industries are involved.

—*Northwest Medicine*, February, 1954.

Air Pollution

THE Department of Industrial Medicine of New York University Post-Graduate Medical School, a unit of New York University-Bellevue Medical Center, is offering a course in Air Pollution beginning May 10, 1954, to acquaint industrial hygienists, stationary engineers, chemical and power plant engineers, safety engineers, insurance engineers, health officials, and others having responsibility for air pollution control with the fundamentals of the measurement and prevention of atmospheric pollution. The sessions will be held daily, morning and afternoon, for two weeks.

Holidays for Housewives

SUCH heavy demands are made on the housewife nowadays that she, in the same way as ordinary wage-earners, should be assured the necessary relaxation in the form of a holiday," said Magnus Jensen, chairman of Norway's Holiday Board, in an address to the Norwegian Society for Social Work last week. He said that last year the State Holiday Fund granted £13,500 to assist about 3,000 housewives to enjoy a brief holiday. Individual grants of up to £4 10s. were made. Only housewives who could not otherwise afford a holiday were helped. A new development is that the Norwegian Parliament has in the present budget year made a direct grant of £20,000 for housewives' holidays.

—*Irish Management*, 1:1, 45 (January-February) 1954.

"Down the Drain"

MANAGEMENT is often unaware that because of a lack of centralized authority and planning, part of each dollar spent on health maintenance is going down the drain." To illustrate this point, the case is cited of one large company with 70 widely

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Medical Director: (S-1) 20 years experience. M.P.H. degree; including course in industrial hygiene. Eligible A.B. Preventive Medicine and Public Health. Age 54. Prefers east. Available now.

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Staff Physician: (S-3) Has passed Part I of American Board of Physical Medicine and Rehabilitation; M.S. in Occupational Medicine. Veteran. Available now; will go anywhere.

Medical Director: (S-4) Surgeon. Age 48. Eight years intensive administrative experience in industry. Has set up and directed to successful consummation several medical programs for industrial companies and has had published articles in this field. Excellent medical background.

Trade Association Field Secretary—Public Relations. (S-5) Age 47. Master's Degree, Northwestern University. Last seven years as Public Relations and Field Secretary in medical field. Previous to that did Public Relations work in hospital field covering United States and Canada. Directed all public relations and organized business organization for large trade association made up of 28 smaller associations; this was on national scale. A real organizer with vast experience in the trade association field.

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[1]*Jl. Inv. Derm.*, 17:125 (Sept., 1951)

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— From comment in *GP*, March, 1954, on American Institute of Management's Study of Industrial Health Programs, in its *Corporate Director*, December, 1953.

Well, Maybe . . . .

THE American Cancer Society for the first time cautiously voices its "suspicion" that cigarette smoking has something to do with lung cancer. The Society summarized a report on the controversial question by 25 leading American cancer researchers in these words: "Evidence to date justifies the suspicion that cigarette smoking does, to a degree as yet undetermined, increase the likelihood of developing cancer of the lung." Dr. Charles S. Cameron, medical and scientific director of the Society, was asked by reporters what he would advise cigarette smokers to do in veiw of the pronouncement. He said: "If you are young and do not smoke, or if you are a beginner smoker without the ingrained habit, do not smoke. If you are an older, confirmed smoker, smoke in moderation." Moderation, Dr. Cameron said, means six to eight cigarettes a day. The research group's consensus put the finger not only on cigarette smoke but also on "atmospheric contaminants in urban centers," variously referred to as smog, smurk, smaze, and smist. Main basis for the conclusion was recent experiments on mice at the University of Chicago and the University of Southern California. Dr. Cameron stressed that none of the evidence against either cigarettes or smog is conclusive. For example, the mice in the Chicago test developed a different kind of cancer from that

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found in the human lung. Also, the Society spokesmen said, there is no certainty that a substance which will cause cancer in mice will cause malignancy in man.

—*Chicago Tribune*, March 18, 1954.

A Solace and a Delight!

WE READ recently of a London debate on the proposition that "tobacco is a blessing." One supporter declared that "we can't risk the great decadence that would be bound to come to a country which has no minor vices," while another said that "tobacco merited approval because it prevented thousands of people from getting fat." If people were to give up smoking because of the fear of dying of cancer of the lung, he said, they might as well give up bacon and eggs for breakfast, because these increase the congulability of the blood and so make the partaker more liable to coronary thrombosis. Tobacco, he said, had been a pleasure, a solace, and sometimes a delight to peaceful and well-adapted personalities for at least 400 years. The individual, doctors not excepted, who enjoys his or her tobacco habit obviously will postpone action thereon until after the battle of the researchers, be they scientifically or commercially inspired.

—From *Pennsylvania Med. J.*, March, 1954.

Peculiar Psychic Spell

DR. WALTER ALVAREZ had other reasons for being keen about Hawaii. He first came in 1888 with his father, Dr. Luis F. Alvarez, and lived many years at Waialua surrounded then by the early cane growers. His father was the only physician from Kaena Point to Kaneohe. Medicine was quite primitive. There were no hospitals within reach. The only hospital in Hawaii worthy of the name at that time

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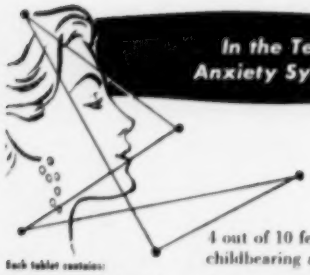

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(1) Vainder, Milton: Indus. Med. & Surg. 22:183 (April 1953)

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was the Queen's Hospital. That was still only a boarding house for the poor sick. Dr. Alvarez saw his father operate on patients lying on the kitchen table with the local minister impressed to give the anesthesia. He remembered the many stories about Kahuna deaths. His father told him of seeing these Hawaiians buckle up and die under the peculiar psychic spell of the ancient Kahuna annaana. There was nothing but ranches at that time at Wahiawa, where now one finds the extensive pineapple plantations and the big army base. He recalled a Portugese (Lopez) from the Azores who had one of these ranches. The cattle were constantly being stolen and killed by the natives. His cowboys knew about it but were afraid to testify. Old Lopez came in distress to Dr. Alvarez. The doctor half jokingly said to the cattleman, "Why don't you hire a Kahuna and have the thieves prayed to death?" This was no sooner said than Lopez said, "I'll do it. I can pay more than the other fellows." A week later two of the thieves died. This stopped the thieving. There were many other stories that added to the romance of the early days prior to 1901 when Dr. Alvarez graduated from the Honolulu High School and went to college. Later Dr. Alvarez worked with Dr. Walter B. Cannon in Boston. It is interesting to note that when Dr. Cannon visited here and heard the stories of the praying Kahunas, he made the comment, "We now know enough about the sympathetic nervous system to be able to give a scientific explanation for this type of death."

—Editorial, in *Plantation Health*, January-April, 1954.

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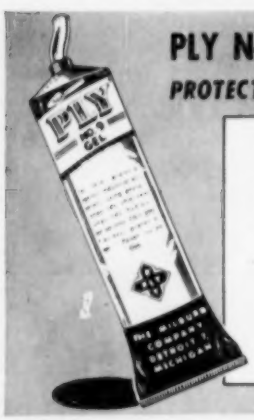

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Industrial Noise—Danger

A FINANCIALLY dangerous situation exists in many plants where noise is sufficiently intense or prolonged to cause hearing loss. According to one legal authority, increase in compensation claims in New York State for loss of hearing "has been substantial." Approximately 500 claims are pending before the Wisconsin State Industrial Commission. Resultant legal, medical, and industrial inquiries have come up with many questions and as many conflicting answers. Greatest controversy seems centered on interpretation of occupational deafness in terms of compensation payments. Is it an accident or a disease? Loss of body member by accident is compensable whether or not wages have been lost. For an occupational disease, wage loss must be shown. Such gradual physiologic impairment can progress for considerable time without economic loss. After worker is discharged because of this impairment he can apply for compensation. A New York State Court of Appeals decision five years ago set off furor when it awarded payment to drop forge worker for loss of hearing although he lost neither wages nor time from work. Associated Industries of New York later sponsored bill which, if passed, would have put these awards back on

wage-loss basis and taken them out of the schedules. On again, off again legislation in Wisconsin finally was settled last July. After two years of court decisions, reversals, and subsequent reversals, that state's compensation law was amended and placed on wage-loss basis. Illinois also is studying this subject. Union view might be represented by statement of Michael Wood, President of Local 247, International Brotherhood of Blacksmiths, AFL, in pamphlet, "Occupational Deafness, Real or Imaginary?": "Legislated compensation provisions must be based on physical as well as economic loss." He suggests that unions with hearing loss problem "contract provisions for payment . . . . based on periodic audiogram determinations. Payments . . . . based on a realistic schedule of wages within plant . . . ." How noisy must noise be . . . . to be harmful? Committee of five doctors appointed by New York State Compensation Board last year to set up medical standards applicable to claims for industrial deafness reported findings this month. A noise level below 90 decibels "is unlikely to be injurious." Hearing of "very susceptible persons may be permanently damaged by exposure for many years to . . . . noises . . . . between 90 and 100 decibels." "Exposure for several hours daily for a long period of time . . . . to levels of 100 to 120 decibels . . . . will cause permanent damage to hearing." "Most persons exposed to several hours of noises . . . . above 120 decibels . . . . will in a matter of months" become permanently deaf. A good test for measuring noise is "band analysis," which determines intensity of each component of the noise. Appraisal of permanency of hearing loss, committee recommends, should be made not less than six months after worker has been away from noise environment. However, Mary Donlon, Chairman of Workmen's Compensation Board of New York, says, "This may not be the last word on this knotty problem." Loss of ability to understand speech, in committee's opinion, should be basic for awards; ability to hear high frequency tones should be considered only where it is needed for job. No test in current use for determining percentage of hearing loss, committee says, is "wholly satisfactory." Best method, as yet not satisfactorily developed, would be direct testing of "ability to understand speech and of conversion of observations into percentages of disability . . . ." Allowance for "normal" aging effect should be 5% loss of persons 51-60, and 10% for those more than 60. But industry cannot afford to wait until these questions have been definitely answered. Industry is, in the meantime, in conjunction with educational and scientific groups, developing ways to eliminate or reduce noise.

—*Personnel Executives' Newsletter* (Deutsch & Shea), 3:24 (December 30) 1953.

"Guide Us Aright"

THROUGH the years of my life, I have accumulated a great deal of experience and given out much advice. Nevertheless, I am humbly conscious of how little of that experience and advice I can pass on to you. The stern law of nature that everything to be of value must be earned stands in the way. The beliefs of other men, native to them through trial and hardship and hard searching, can never be your innermost conviction. You must win through to your own. And yet you as doctors, nurses and safety people must have

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a philosophy of life based on definite convictions. I believe that it is extremely important that these convictions rest upon certain fundamental postulates. With your permission, I would like to tell you what I think these should include. None of you can be most effective in your work unless you operate on a plane of high ideals. These ideals must embody a love of your fellow man, a recognition of his essential personal dignity, and a desire to be of utmost service to him. You cannot be completely materialistic; you must have a large share of altruism. Never forget the Golden Rule. If it is ever present in your mind, it will save you and those around you from much trouble. Work out for yourself an answer which you can accept wholeheartedly to the Biblical question "Am I my brother's keeper?" Always remember that you are but a tool of a Divine Providence and that true happiness in your life will only come when you dedicate yourself to service as an instrumentality of that Divine Providence. With such a spirit of dedication, you cannot help but be better doctors, nurses and safety people. Let your prayer be an echo of the old Scotch preacher who said, "Oh Lord, guide us aright for we are verra, verra determined."

—C. T. Olson, M.D., Division Medical Director, Liberty Mutual Insurance Company, in an Address at Indianapolis on February 17, 1954, at a Joint Meeting of the Indianapolis Chamber of Commerce Council on Safety and the Industrial Section, Central District, Indiana State Nurses Association.

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PHOTOGRAPH BY RICHARD BEATTIE

To every Uncle in the whole wide world...

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When Uncles come to visit you, they bring you candy and presents, and they talk to you like you were a grownup yourself, and they let you do things your mother mostly won't let you do.

My favorite uncle is Uncle Ralph. He's sick in the hospital with cancer, and people say that he is going to die because they found out about it too late. They say that only a miracle can save him, and you can't expect miracles.

But my father told me about an Uncle *he* had once (did you know fathers have uncles, too?) And this uncle was supposed to die for sure because he had something called diabetes. But he's alive now, though he's very old and lives in St. Petersburg, because they found something called insulin.

Maybe somewhere scientists will find something that will save my uncle. Dad says they're trying all the time and they're making lots of progress, but they need more money.

Last year, he says, people gave the American Cancer Society enough so they could spend almost $5,000,000 to try to find new cures for cancer. Dad says that is more than ever before, but it is less than four cents a year for each American. That doesn't seem like much, because I get more than that for gumdrops, in just a week, when I'm good.

I thought if all the other uncles knew about this, then they would send more than four cents—lots more. Won't you—? Please.

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In a series of 231 cases of psoriasis[1] receiving various methods of treatment, remission occurred in only 16.5%.

In a special series[2] of stubborn cases, all of which had failed to respond to other treatments, RIASOL was the only medication applied.

The results with RIASOL were as follows: Definite improvement in 76% cases, complete clearing of skin patches in 38%, scaliness cleared or greatly relieved in 71%, average healing time 7.6 weeks, no ill effects in any case, failures 24%.

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RIASOL is supplied in 4 and 8 fld. oz. bottles at pharmacies or direct.

1. *Arch. Dermat. & Syph.* 35:1031, 1937.
2. *Med. Rec.* 151:397, 1940.

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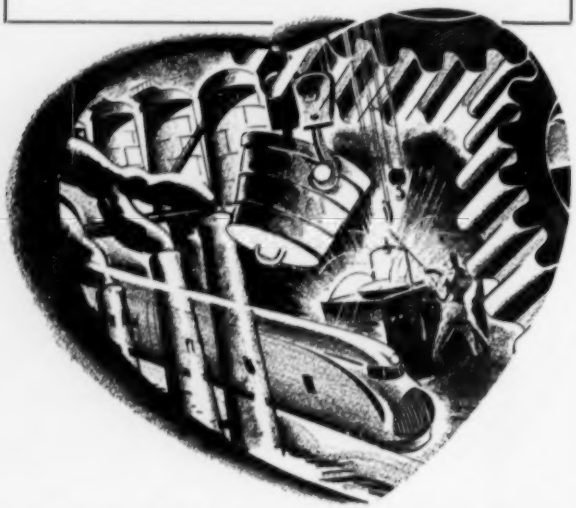

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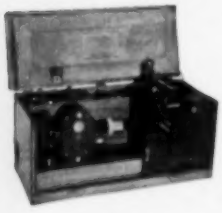

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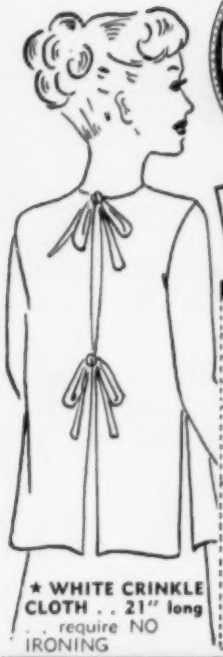

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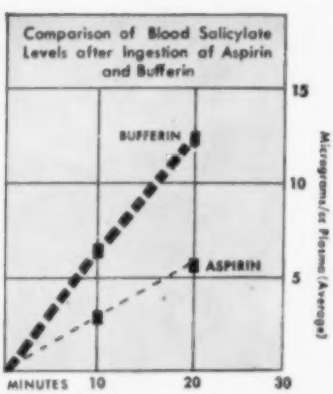

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*Sulzberger, Marion B., and Wolf, J.: Dermatologic Therapy in General Practice, ed. 4, Chicago, Year Book Publishers, Inc., 1948, p. 227.

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